

KIC 007902693

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
007902693-02	OBS	No	285.001002	337.547351	997.9	6.855	14.5	7.9	0.59	5100	2.15	0.42
007902693-03	OBS	No	342.719023	397.342097	700.0	5.694	10.2	6.0	0.59	5100	1.71	0.33
007902693-04	OBS	No	415.088321	452.782122	1096.7	4.678	18.4	8.0	0.59	5100	1.95	0.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007902693-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007902693-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007902693-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

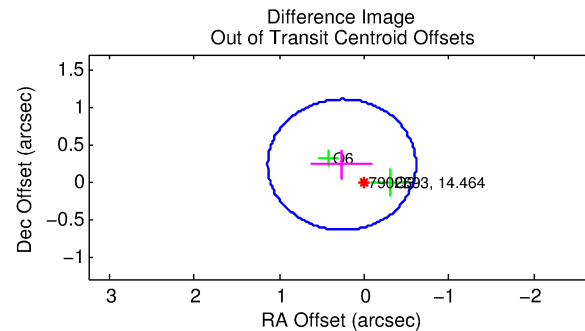
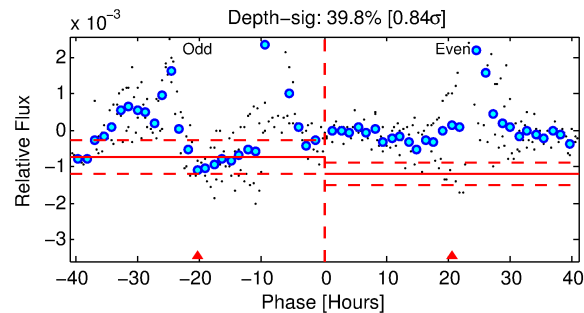
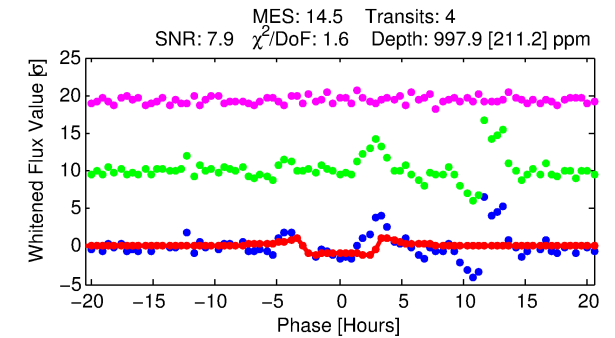
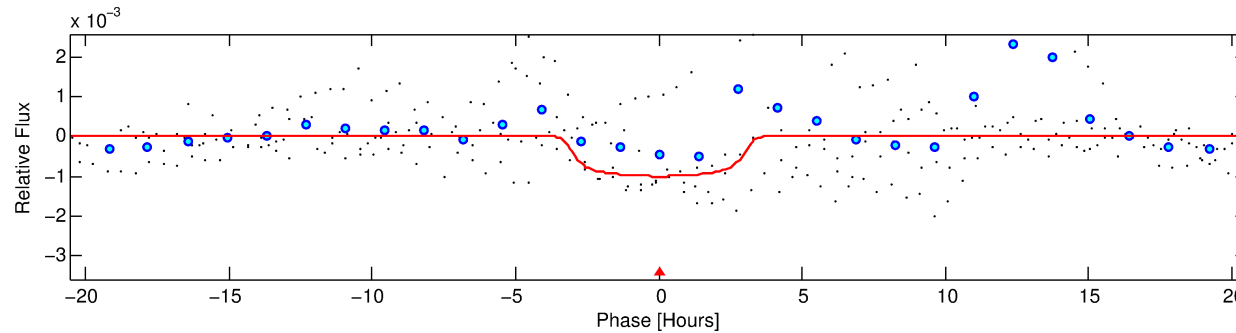
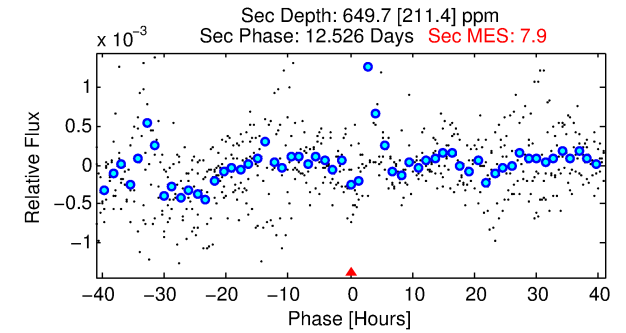
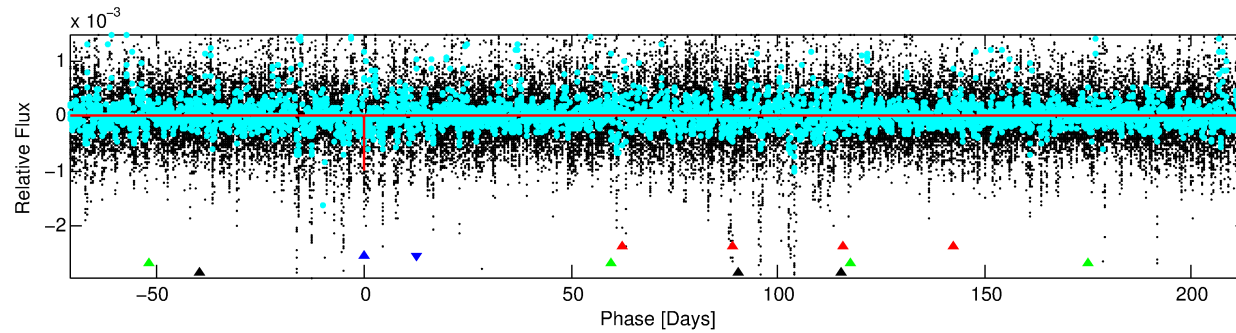
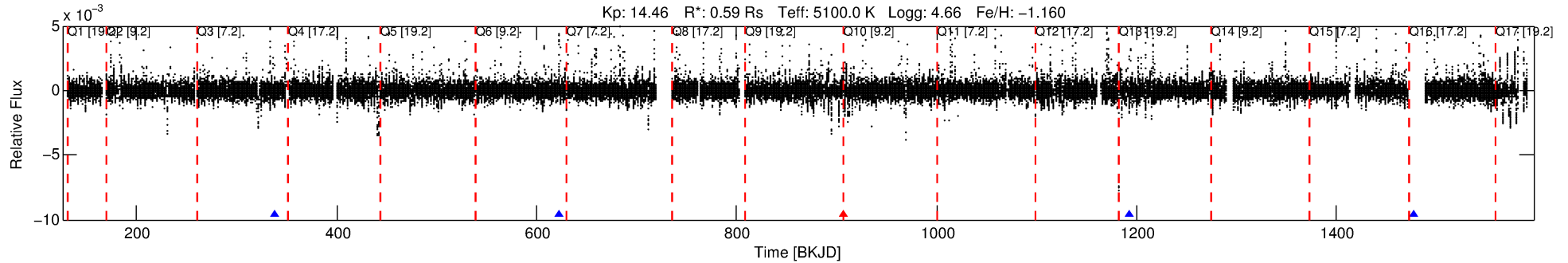
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007902693-02

No Significant Match Found

DV One-Page Summary

KIC: 7902693 Candidate: 2 of 4 Period: 285.001 d



DV Fit Results:

Period = 285.00100 [0.00616] d
Epoch = 337.5474 [0.0114] BKJD
Rp/R* = 0.0331 [0.0065]
a/R* = 185.55 [116.43]
b = 0.85 [0.21]
Seff = 0.42 [0.07]
Teq = 205 [8] K
Rp = 2.15 [0.45] Re
a = 0.7125 [0.0435] AU
Ag = 39403.56 [20482.86] [1.92 σ]
Teffp = 4475 [590] K [7.23 σ]

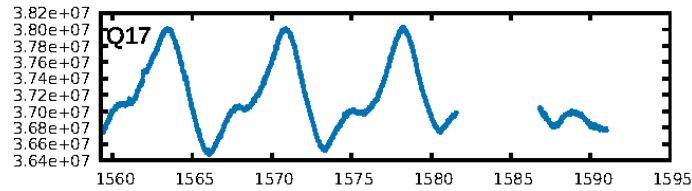
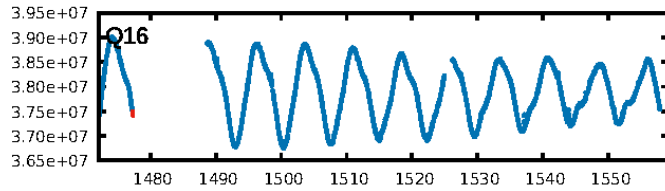
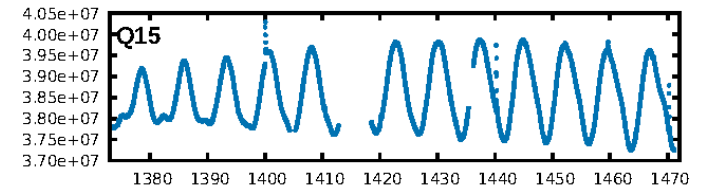
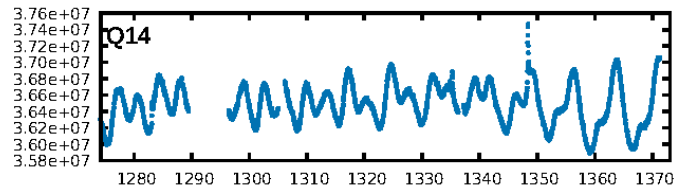
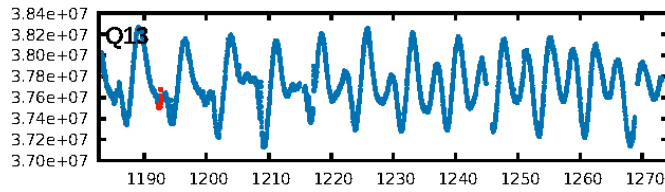
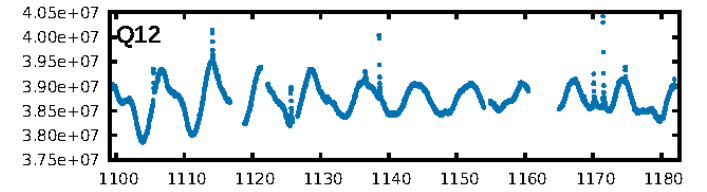
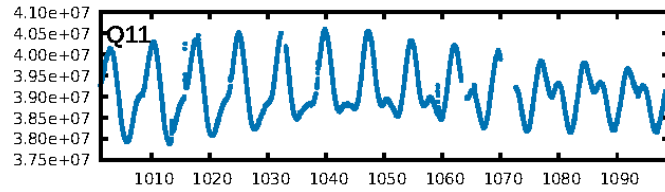
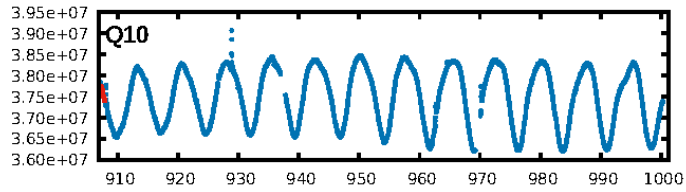
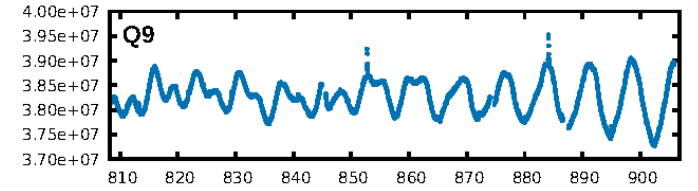
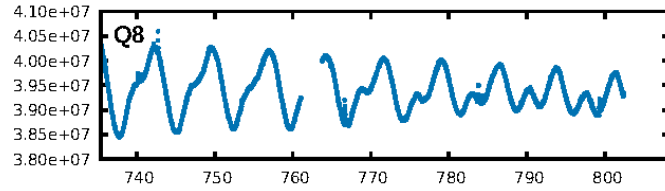
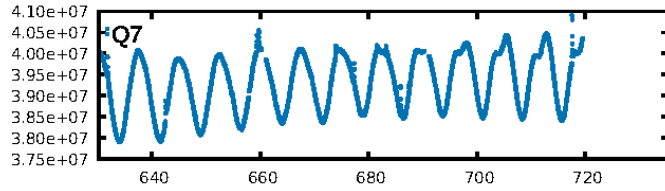
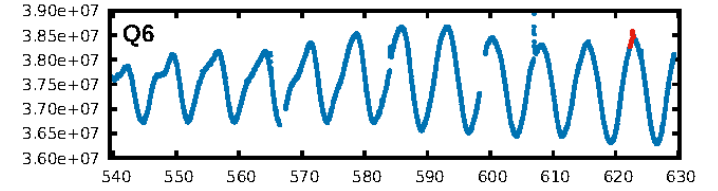
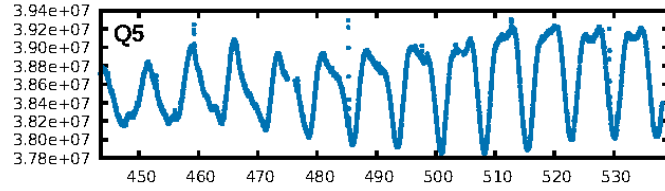
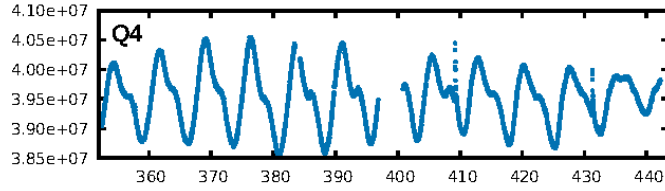
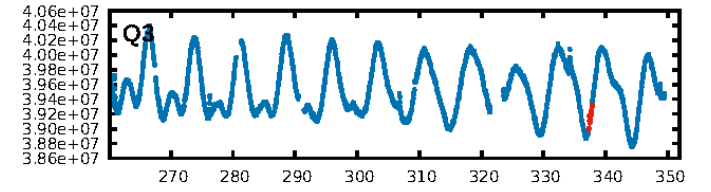
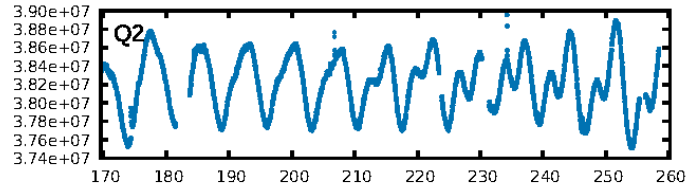
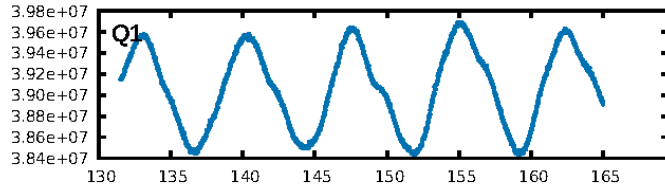
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [81.04 σ]
ModelChiSquare2-sig: 14.7%
ModelChiSquareGof-sig: 94.3%
Bootstrap-pfa: N/A
RollingBand-fgt: 0.75 [3/4]
GhostDiagnostic-chr: 1.936
Centroid-sig: 2.2%
Centroid-so: 1.229 arcsec [1.19 σ]
OotOffset-rm: 0.344 arcsec [1.18 σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-rm: 0.292 arcsec [1.16 σ]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 09:35:29 Z

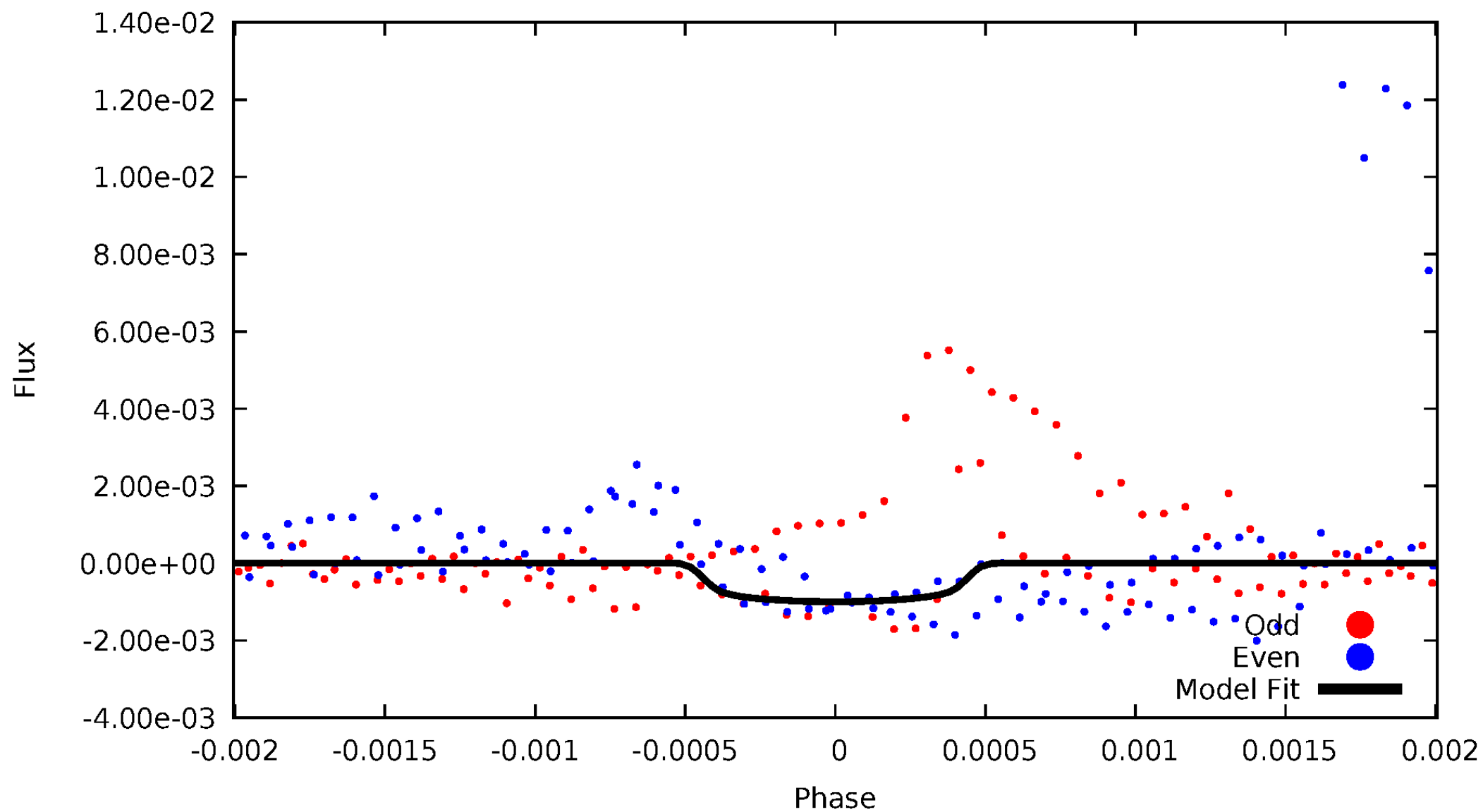
This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 007902693-02, PDC Light Curves



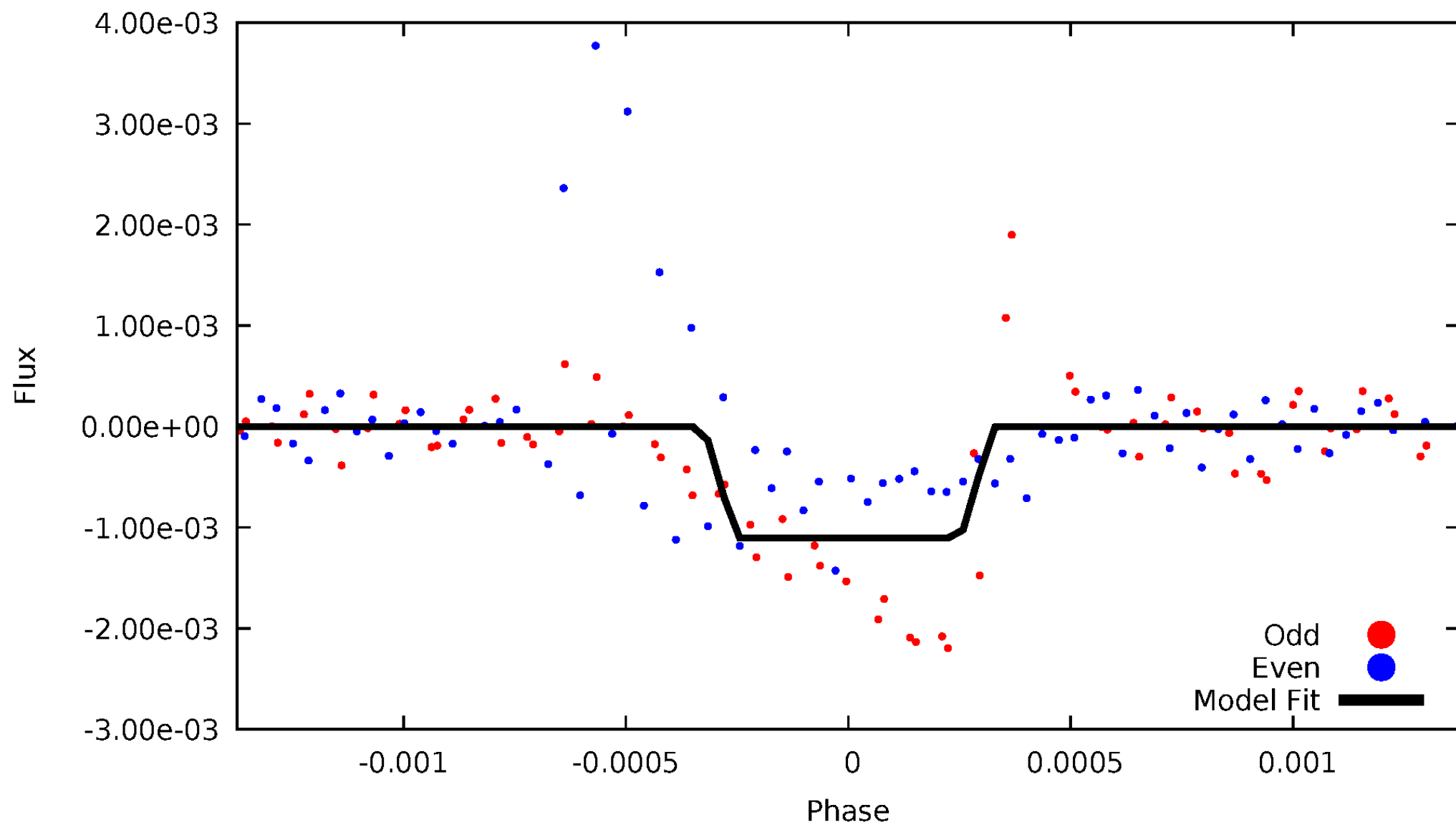
DV Odd/Even

TCE 007902693-02



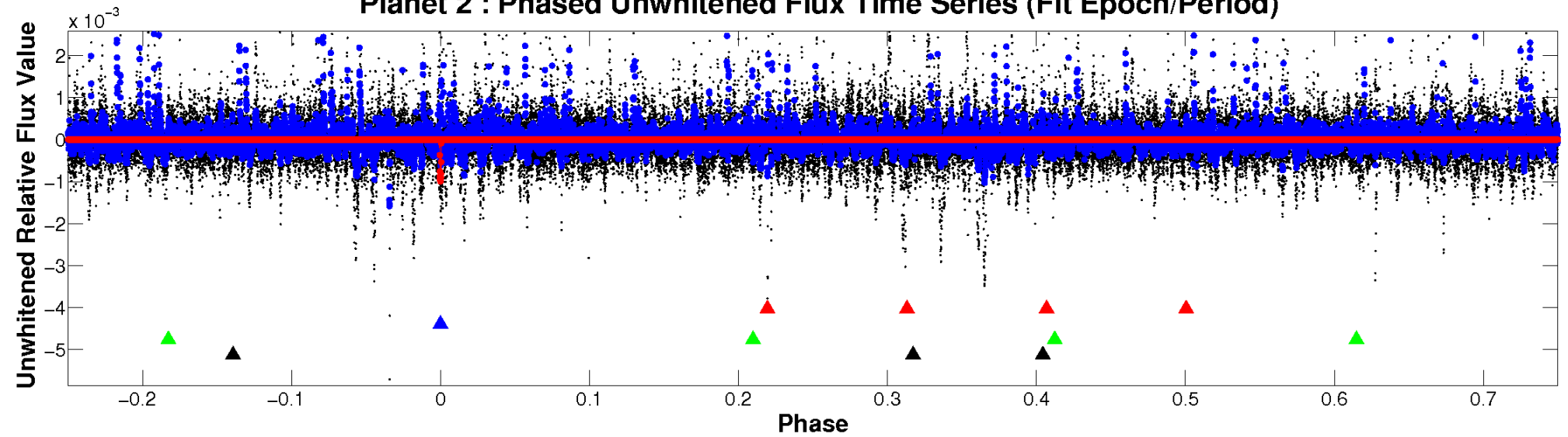
ALT Odd/Even

TCE 007902693-02

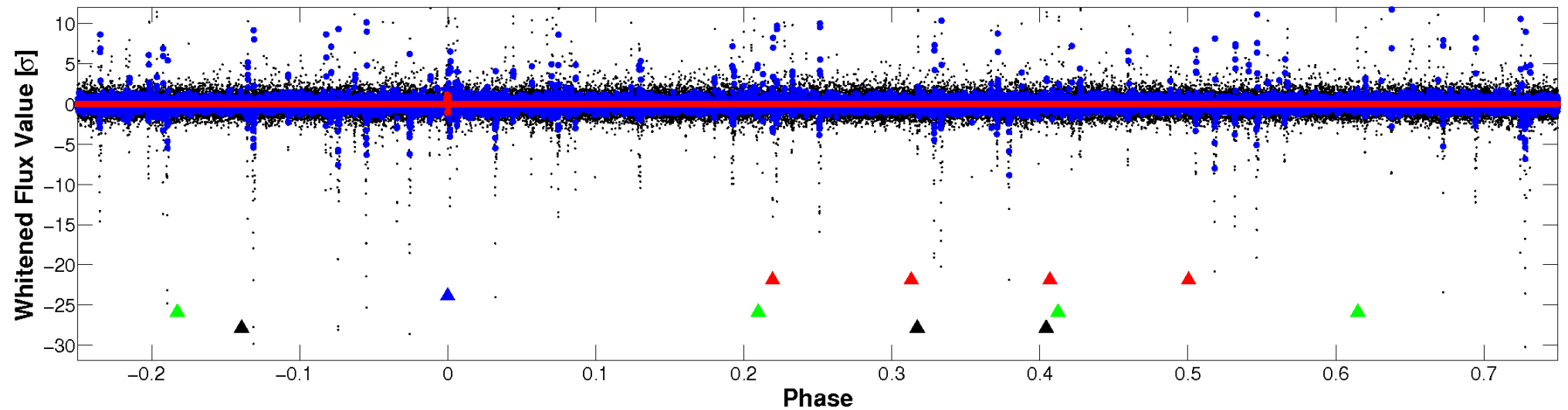


Non-Whitened Vs. Whitened Light Curve

Planet 2 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

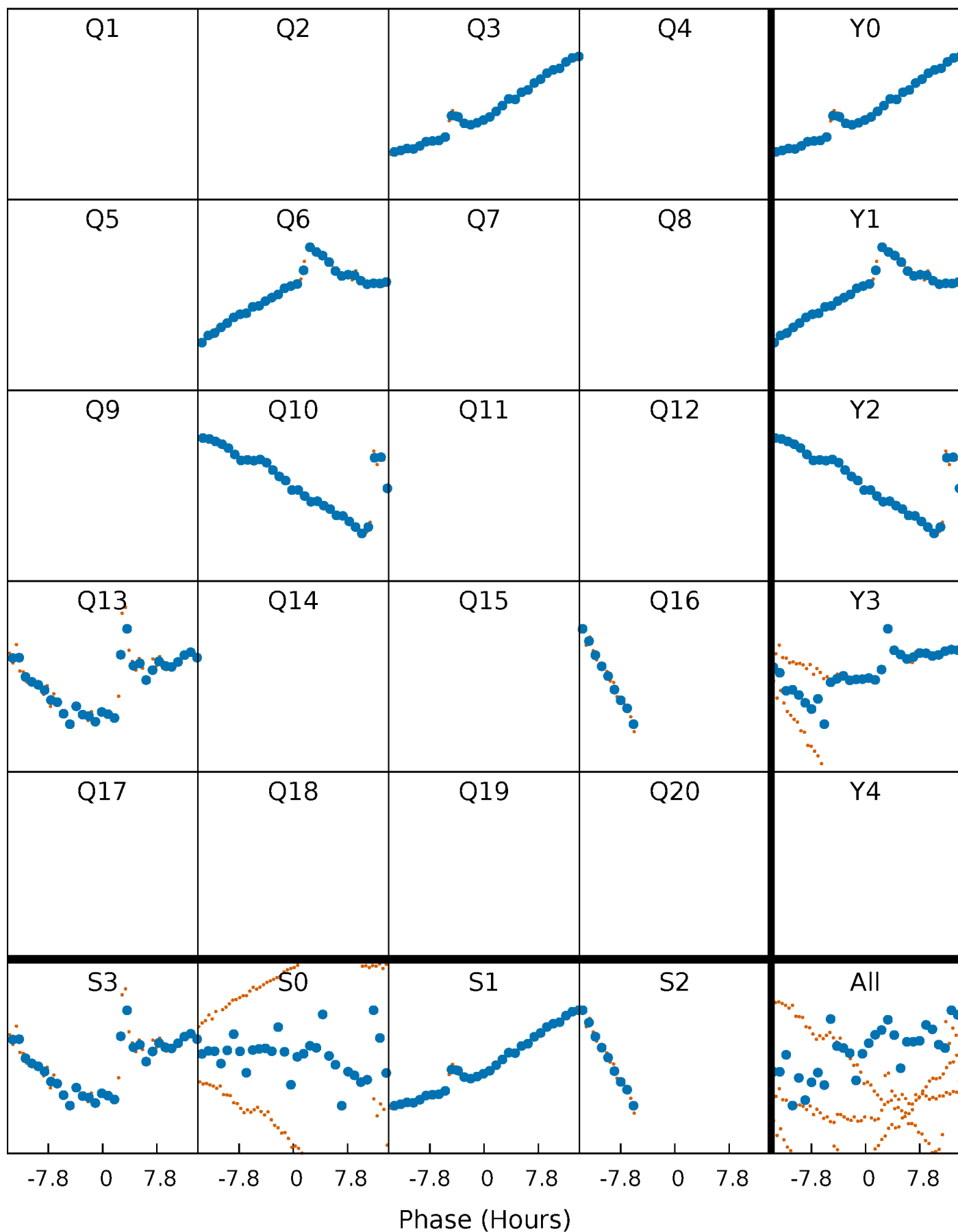


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



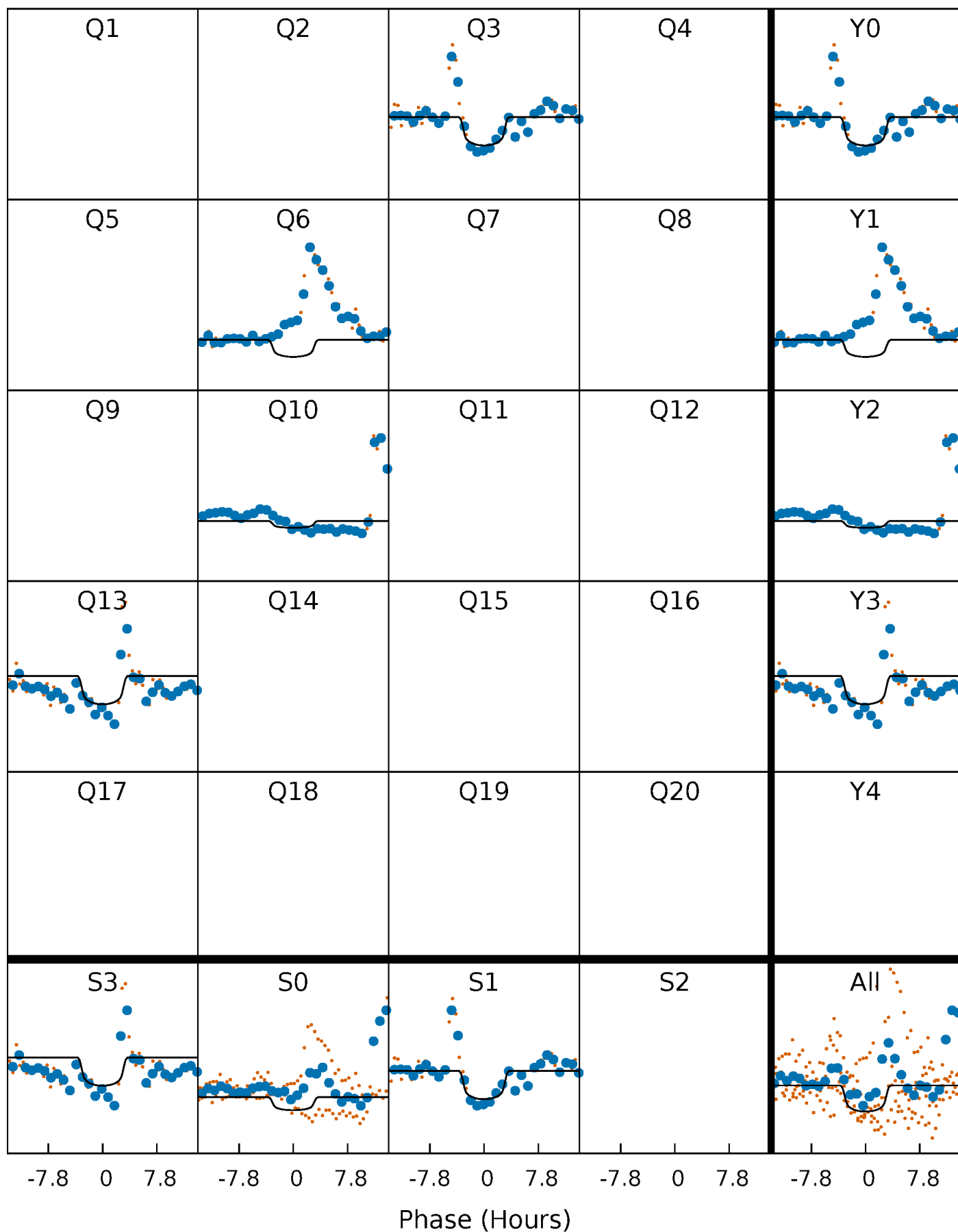
PDC Quarter-Phased Transit Curves

TCE 007902693-02 P=285.001002 Days $T_0=337.547351$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 007902693-02 P=285.001002 Days $T_0=337.547351$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

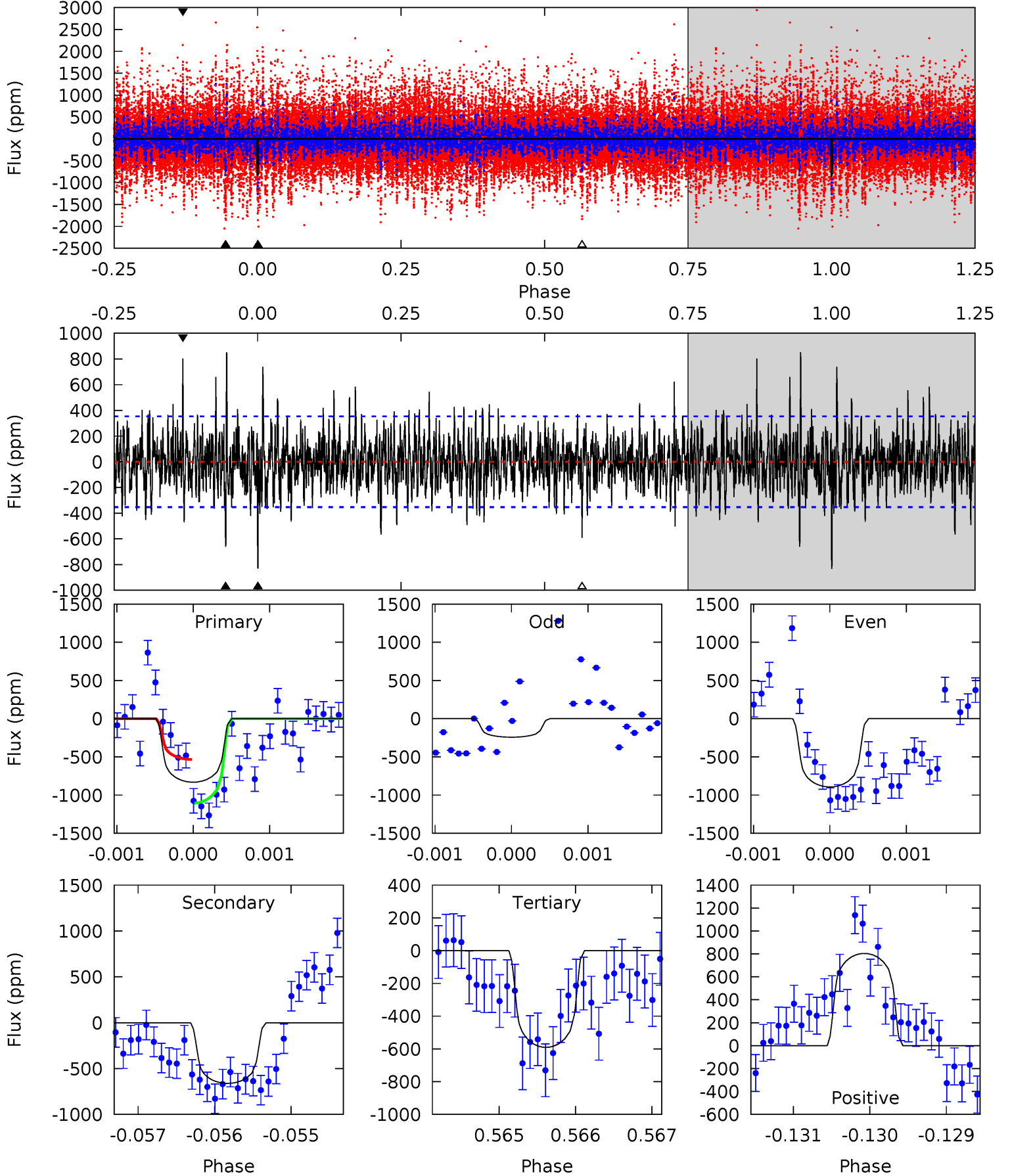
TCE 007902693-02 P=285.014106 Days $T_0=337.520635$ (BKJD)



DV Model-Shift Uniqueness Test

007902693-02, P = 285.001002 Days, E = 52.546349 Days

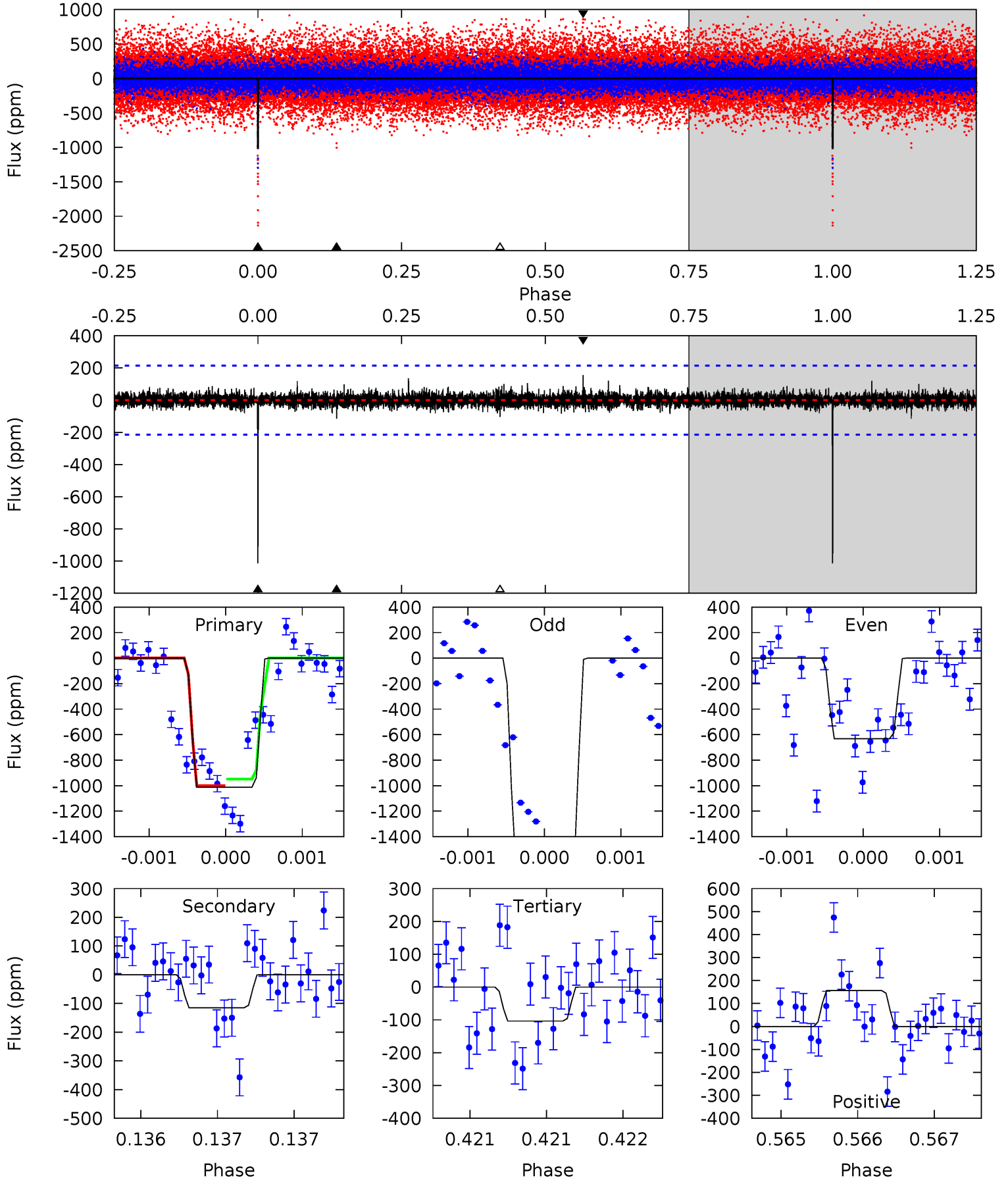
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.8	10.2	9.09	12.4	5.44	3.27	2.52	3.71	0.42	1.10	-2.19	4.78	0.21	0.51	4.36



Alt Model-Shift Uniqueness Test

007902693-02, P = 285.014106 Days, E = 52.506529 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.1	2.96	2.67	4.03	5.53	3.41	0.60	23.5	22.1	0.29	-1.06	12.5	0.96	0.13	0.65



Stellar Parameters For KIC 007902693

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5100^{+167}_{-152}	$4.664^{+0.054}_{-0.032}$	$-1.160^{+0.300}_{-0.300}$	$0.594^{+0.040}_{-0.040}$	$0.594^{+0.047}_{-0.022}$	$3.986^{+0.837}_{-0.516}$
	+3%/-3%	+1%/-1%	+26%/-26%	+7%/-7%	+8%/-4%	+21%/-13%
Source	PHO1	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 007902693-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-662 ± 65	$2.11^{+0.45}_{-0.39}$	286^{+10}_{-10}	4628^{+424}_{-356}	42086^{+20523}_{-13879}
Alt.	-115 ± 39	$2.14^{+0.45}_{-0.43}$	286^{+10}_{-9}	3382^{+289}_{-273}	6982^{+4563}_{-2851}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

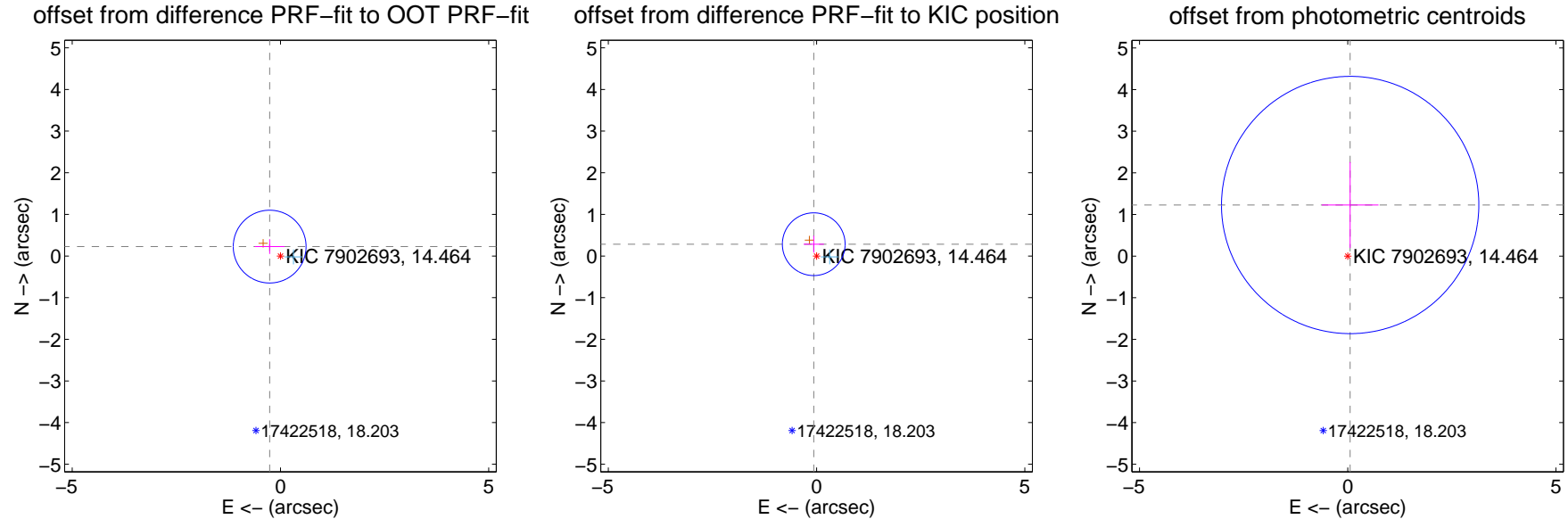
DV Centroid Data

Supplemental centroid analysis for 007902693-02. Kepler magnitude: 14.46. Transit SNR 7.93

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.25 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.344 ± 0.291	1.18	0.259 ± 0.355	0.226 ± 0.176
PRF-fit source offset from KIC position	0.292 ± 0.251	1.16	0.068 ± 0.243	0.284 ± 0.204
photometric centroid source offset	1.23 ± 1.03	1.19	-0.06 ± 0.68	1.23 ± 1.03



Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

Q1 no difference image



Q1 no OOT image



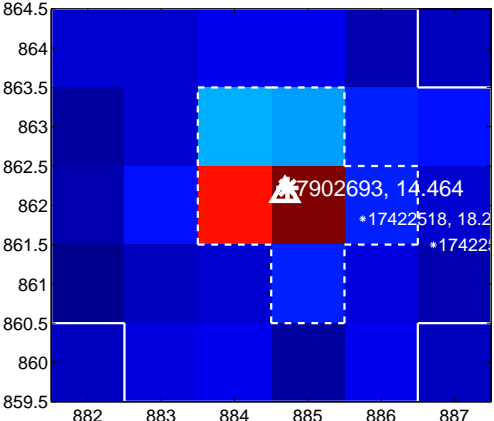
Q2 no difference image



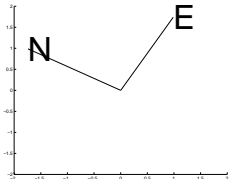
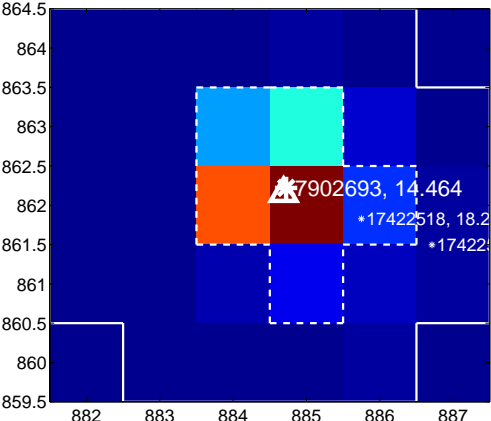
Q2 no OOT image



Q3 difference image



Q3 OOT image



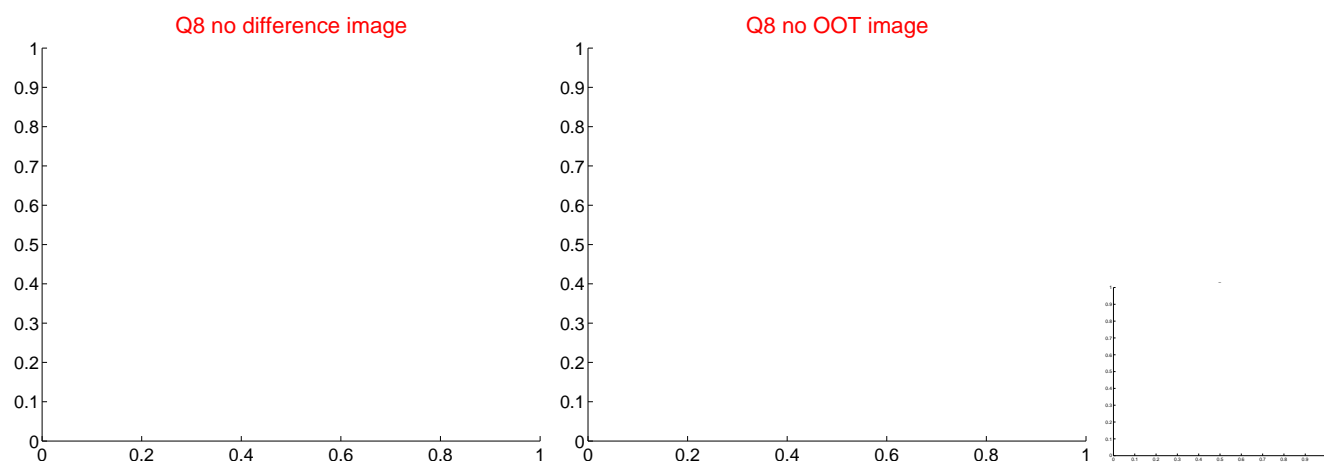
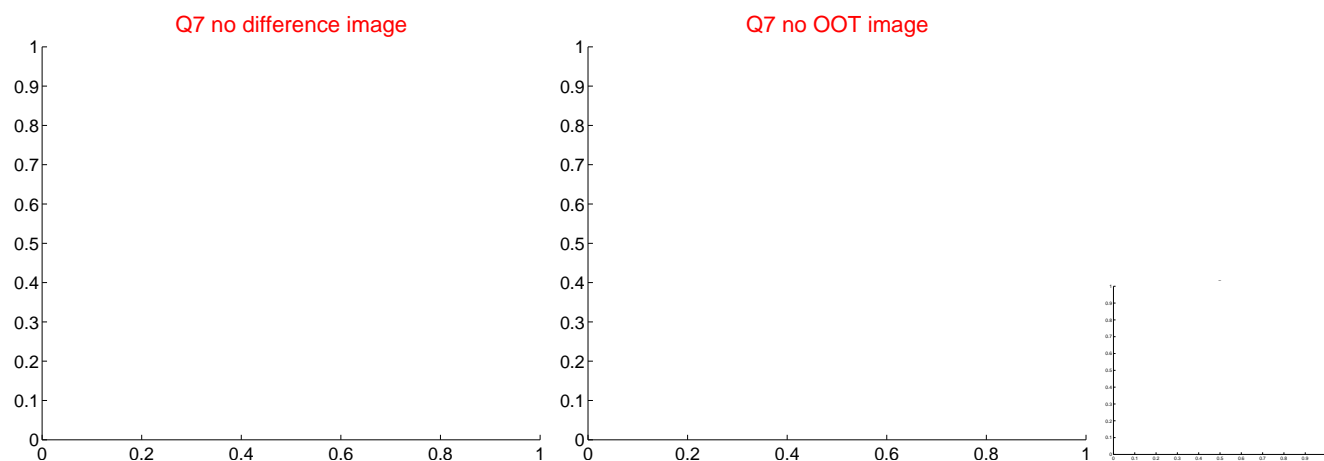
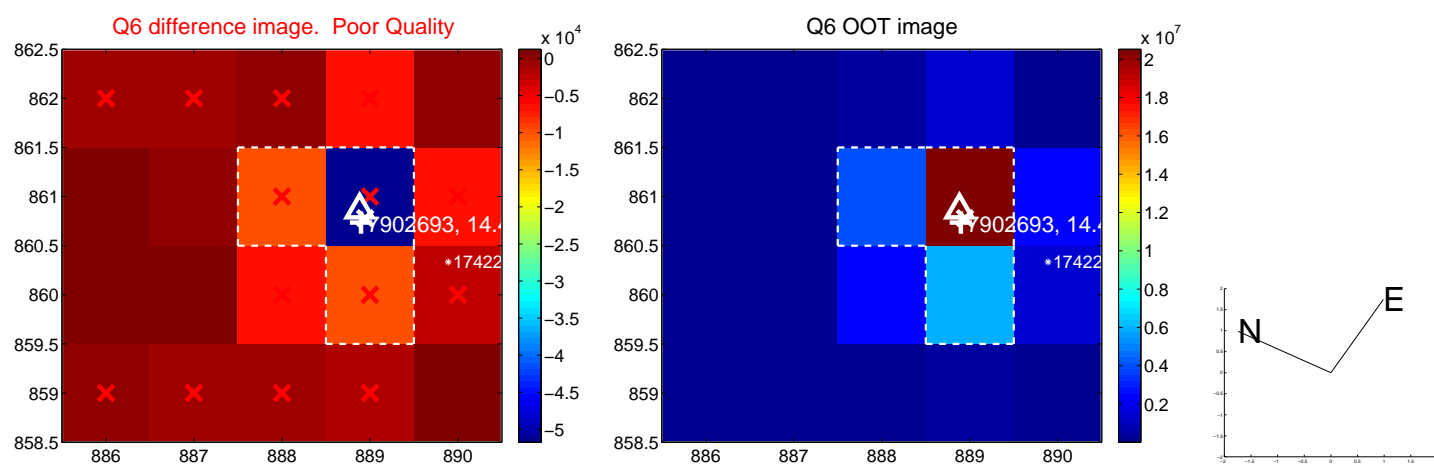
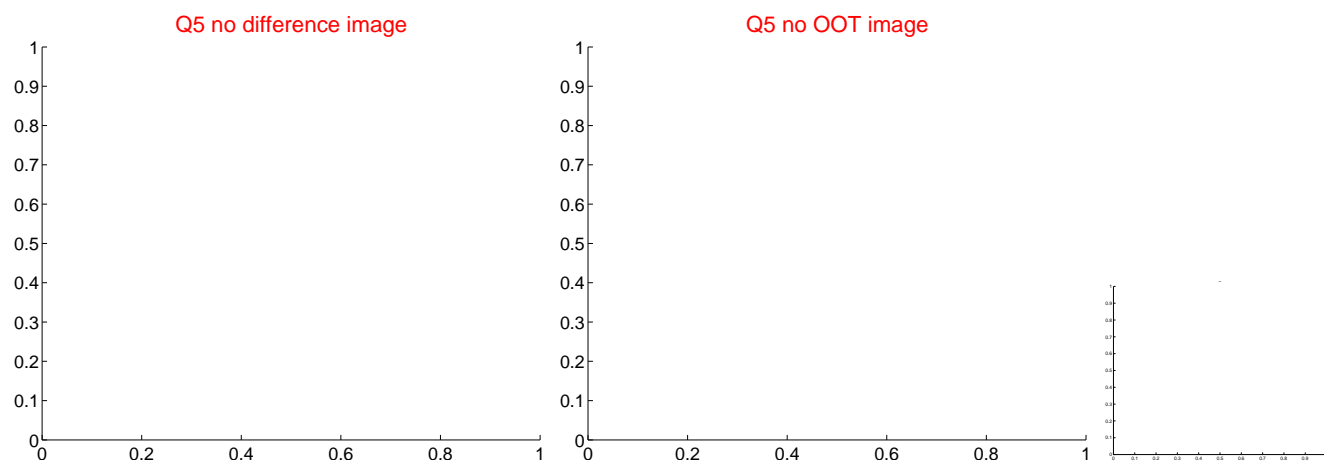
Q4 no difference image



Q4 no OOT image



white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



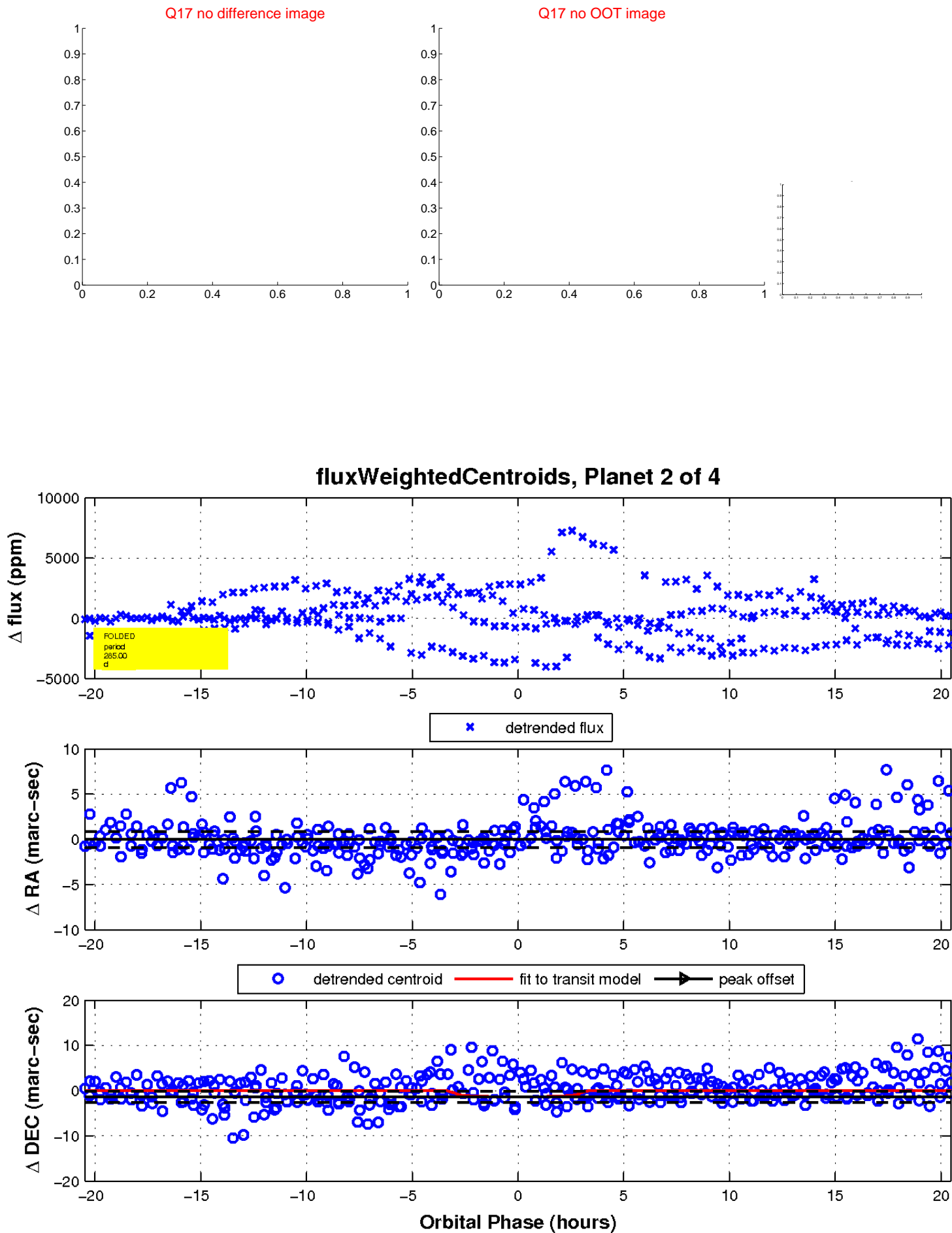
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

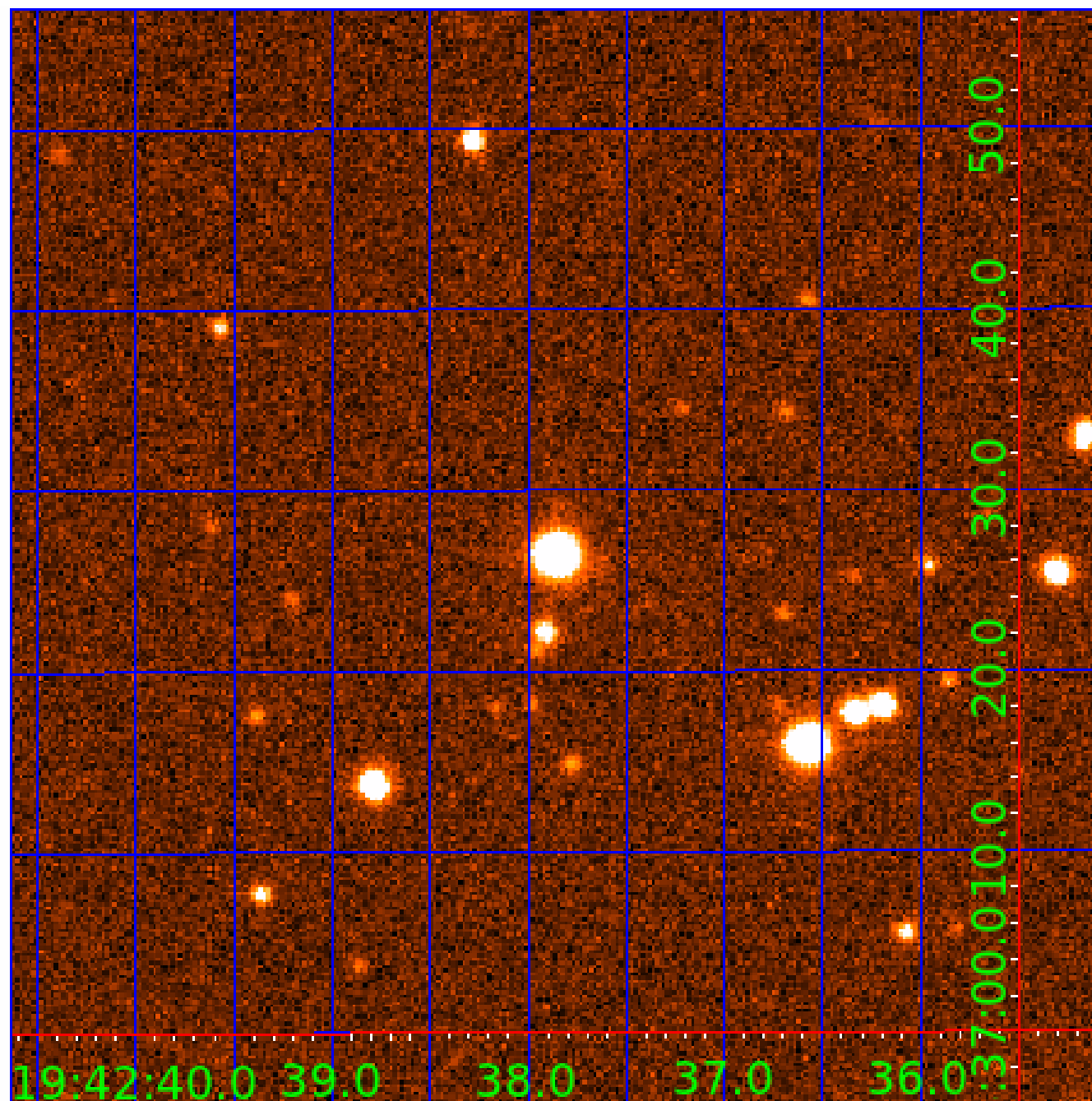


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007902693

Q1-17 DR25 TCE Parameters

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007902693-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007902693-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

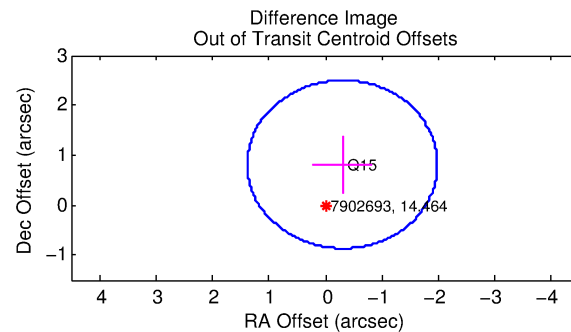
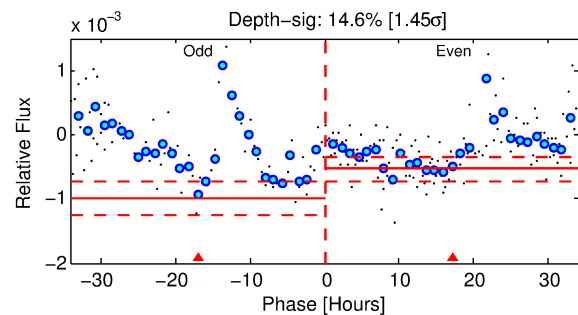
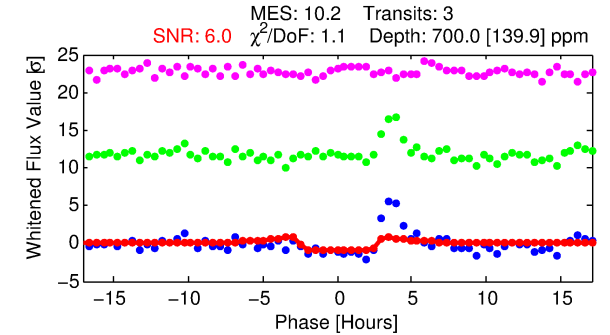
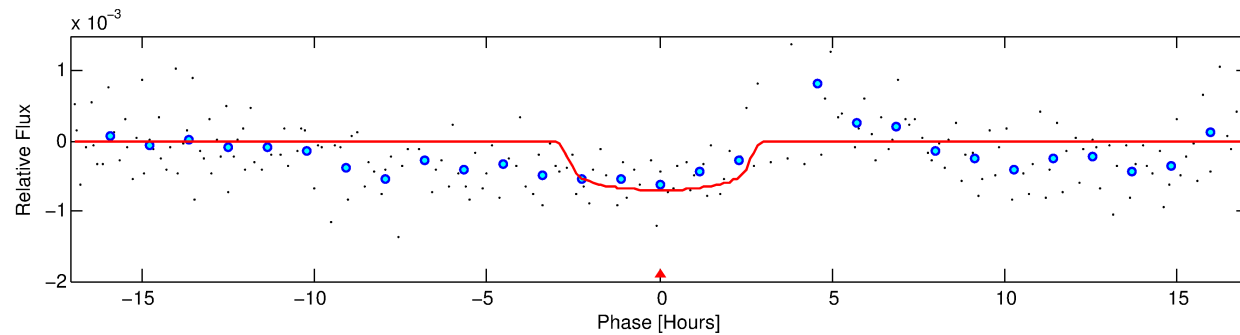
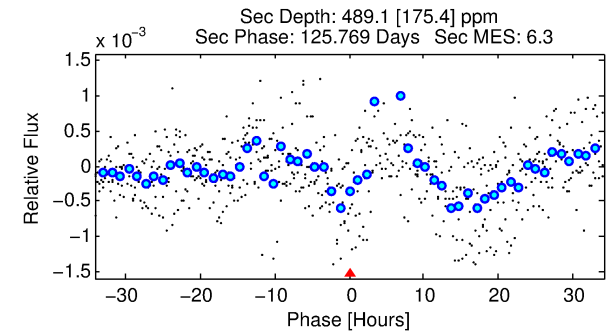
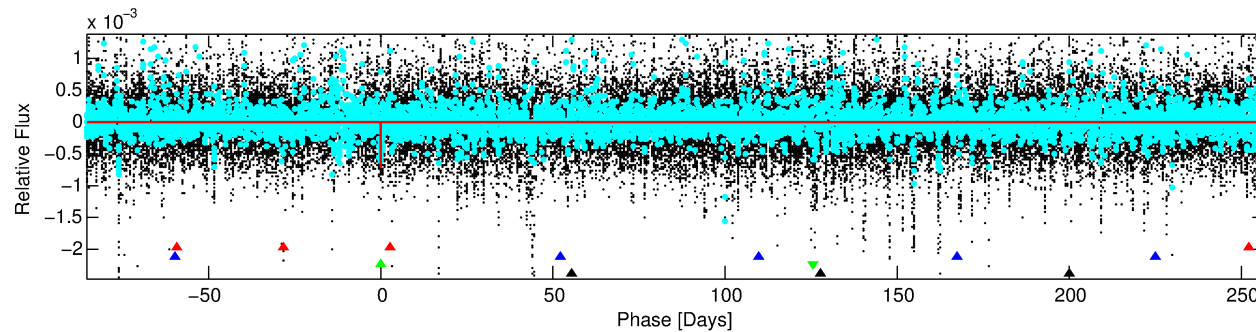
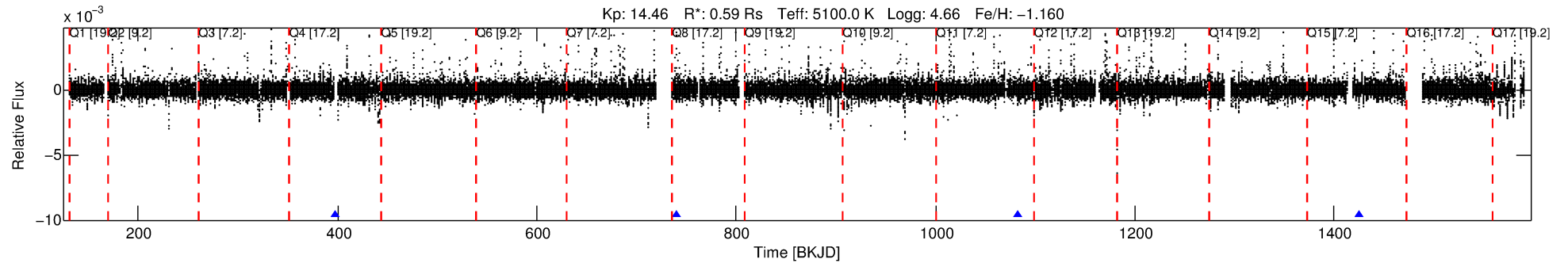
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007902693-03

No Significant Match Found

DV One-Page Summary

KIC: 7902693 Candidate: 3 of 4 Period: 342.719 d



DV Fit Results:

Period = 342.71902 [0.00817] d
Epoch = 397.3421 [0.0193] BKJD
Rp/R* = 0.0263 [0.0187]
a/R* = 321.66 [973.22]
b = 0.75 [1.77]
Seff = 0.33 [0.05]
Teq = 193 [8] K
Rp = 1.71 [1.22] Re
a = 0.8057 [0.0492] AU
Ag = 60005.75 [88141.58] [0.68 σ]
Teffp = 4675 [1720] K [2.61 σ]

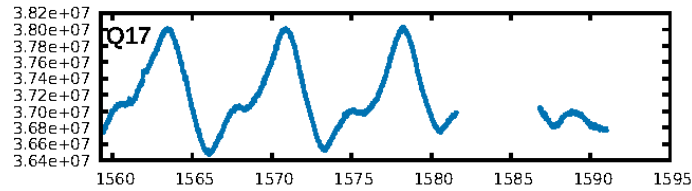
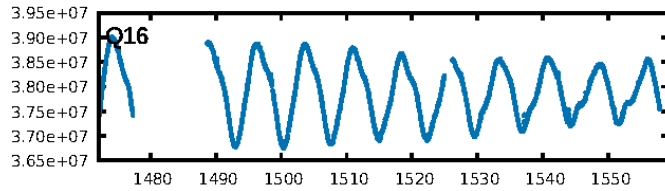
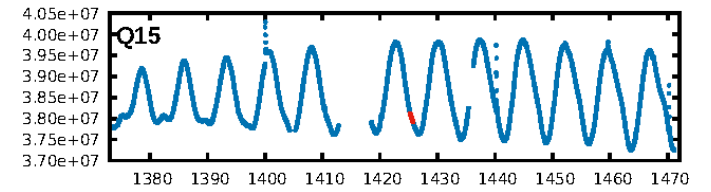
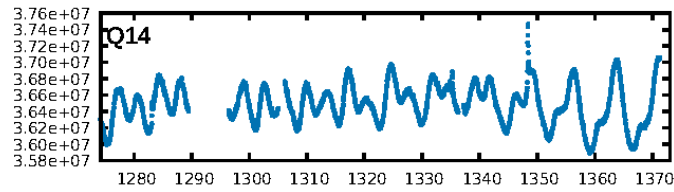
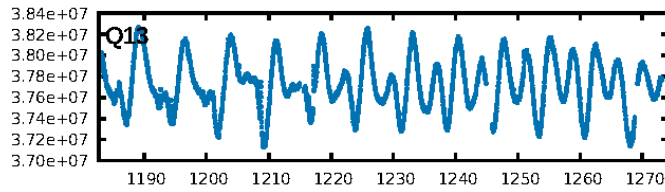
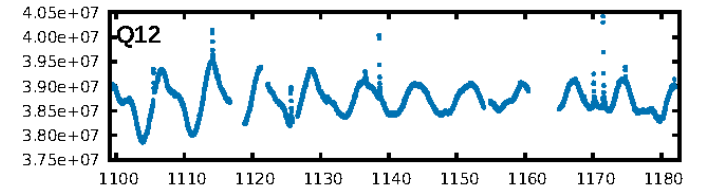
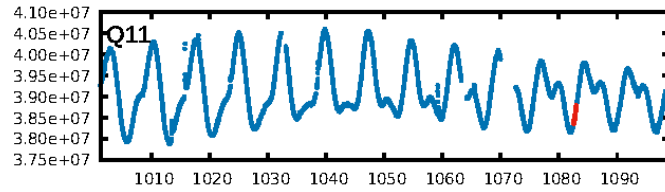
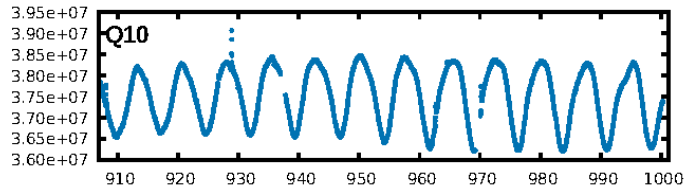
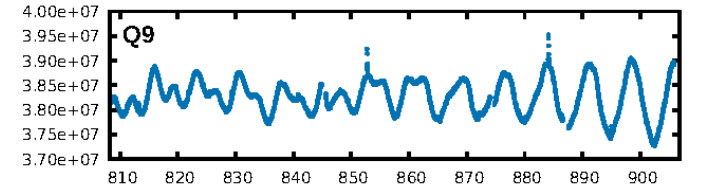
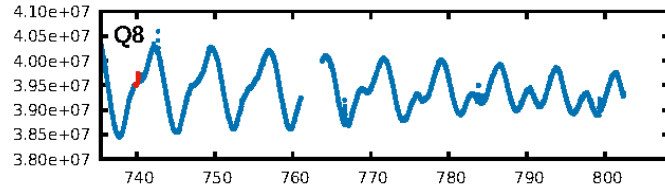
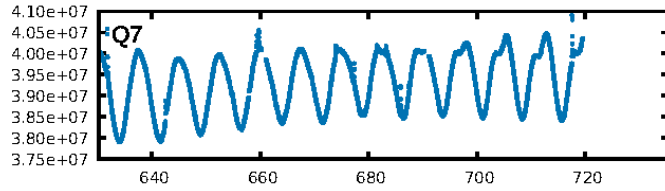
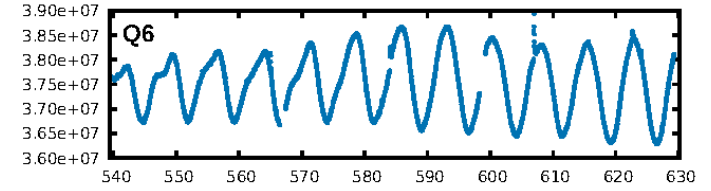
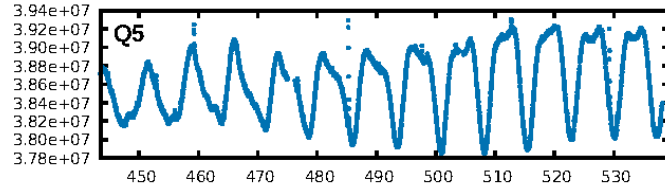
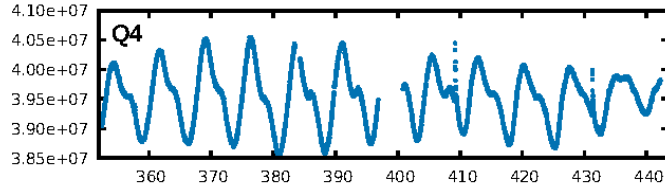
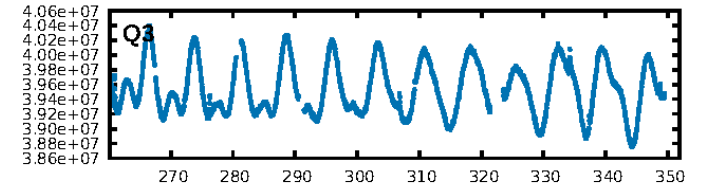
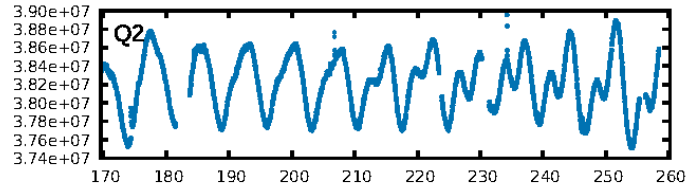
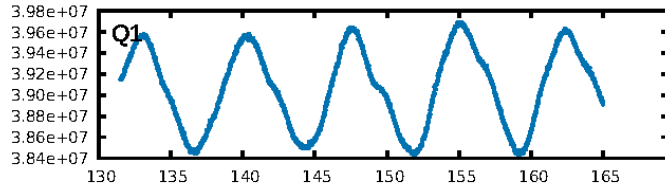
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [107.50 σ]
LongPeriod-sig: 100.0% [235.69 σ]
ModelChiSquare2-sig: 2.5%
ModelChiSquareGof-sig: 78.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 0.2923
Centroid-sig: 15.8%
Centroid-so: 1.491 arcsec [0.83 σ]
OotOffset-rm: 0.868 arcsec [1.55 σ]
KicOffset-rm: 0.908 arcsec [1.62 σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [2/2]

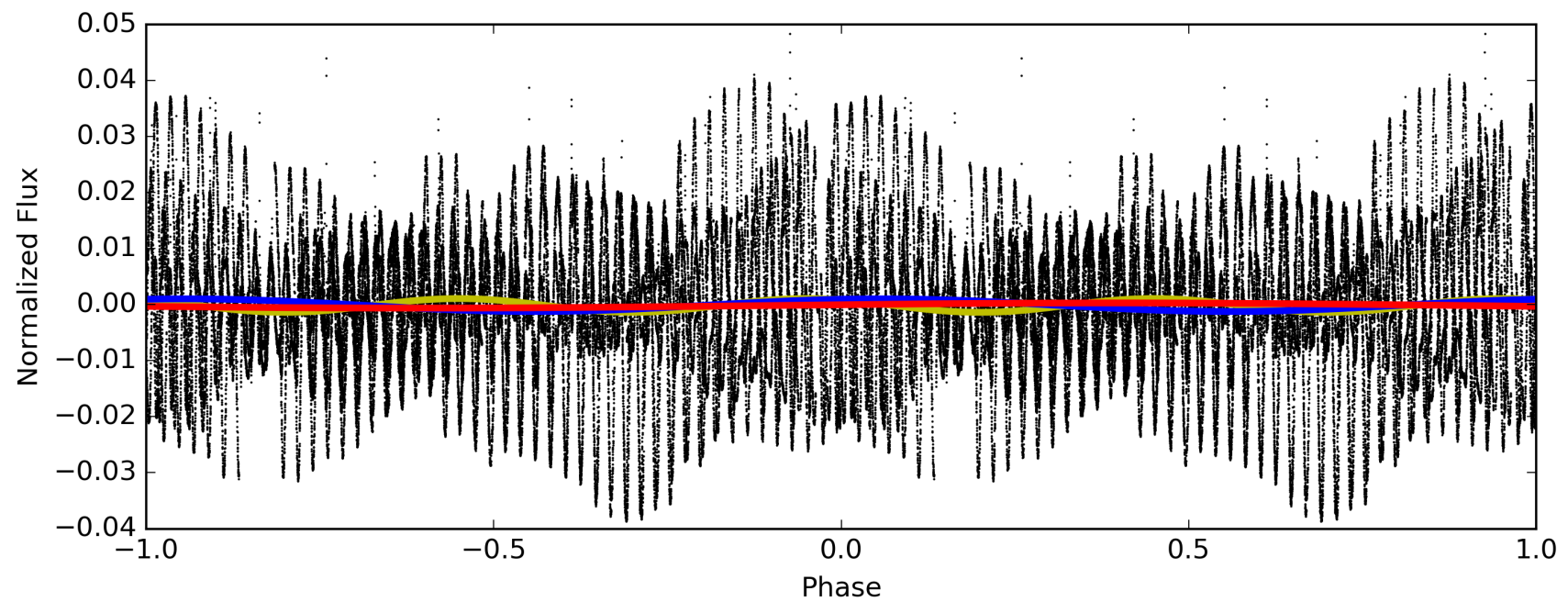
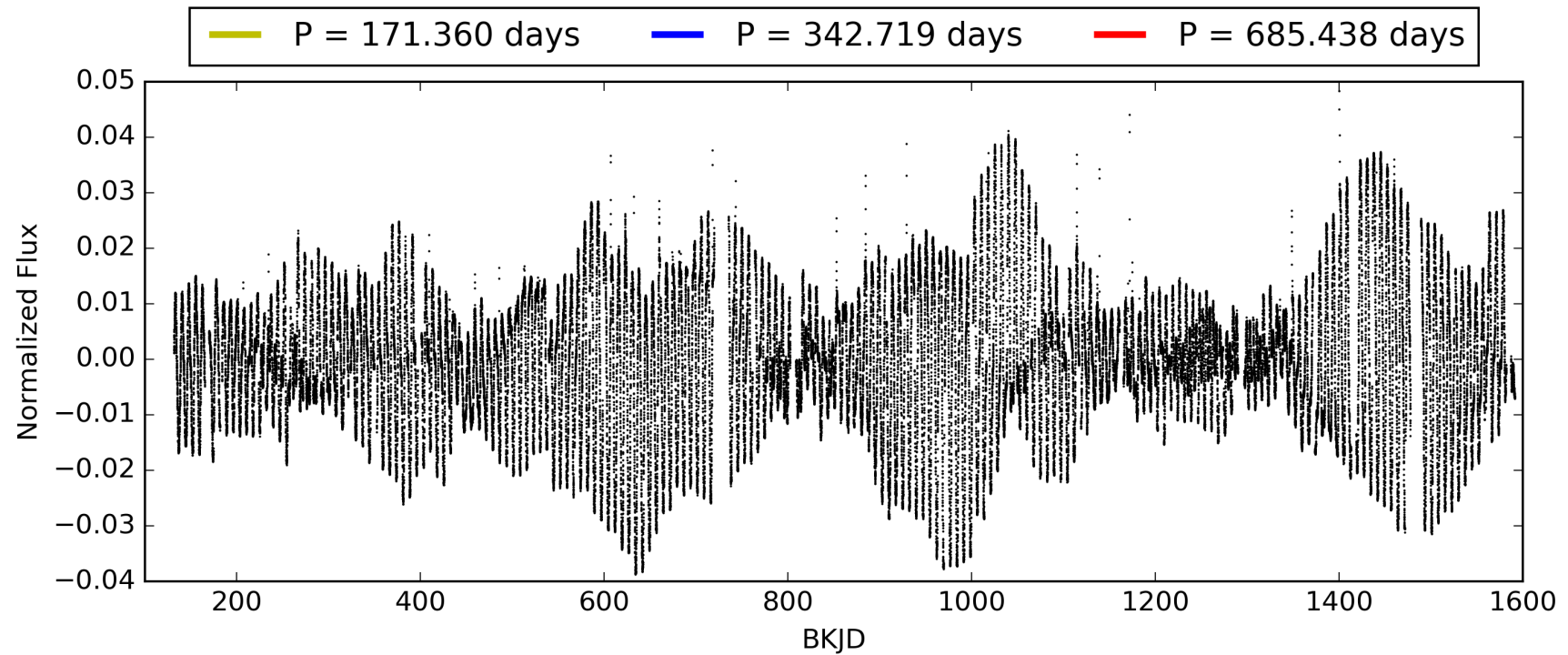
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 09:35:41 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 007902693-03, PDC Light Curves

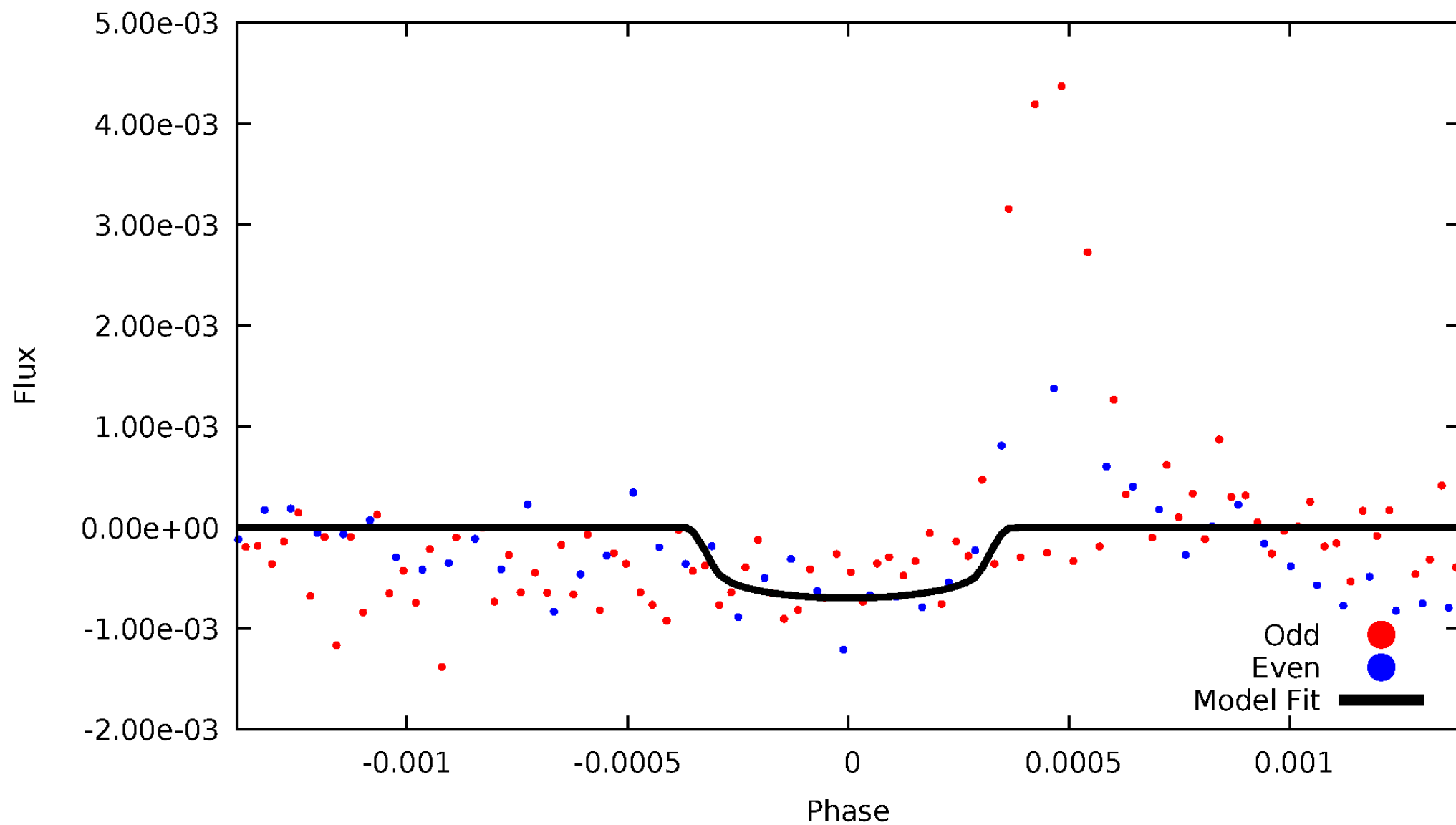


TCE 007902693-03



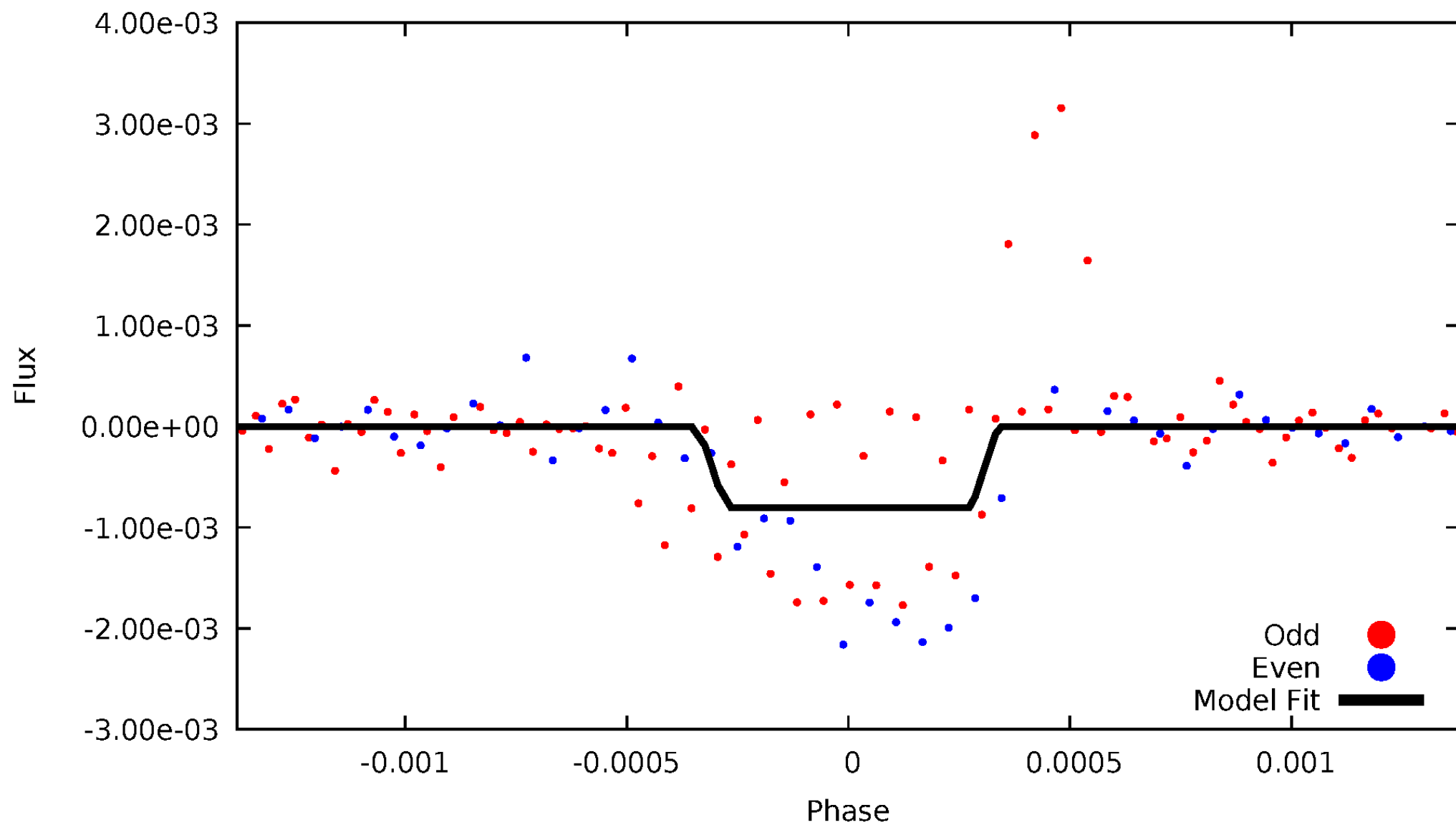
DV Odd/Even

TCE 007902693-03



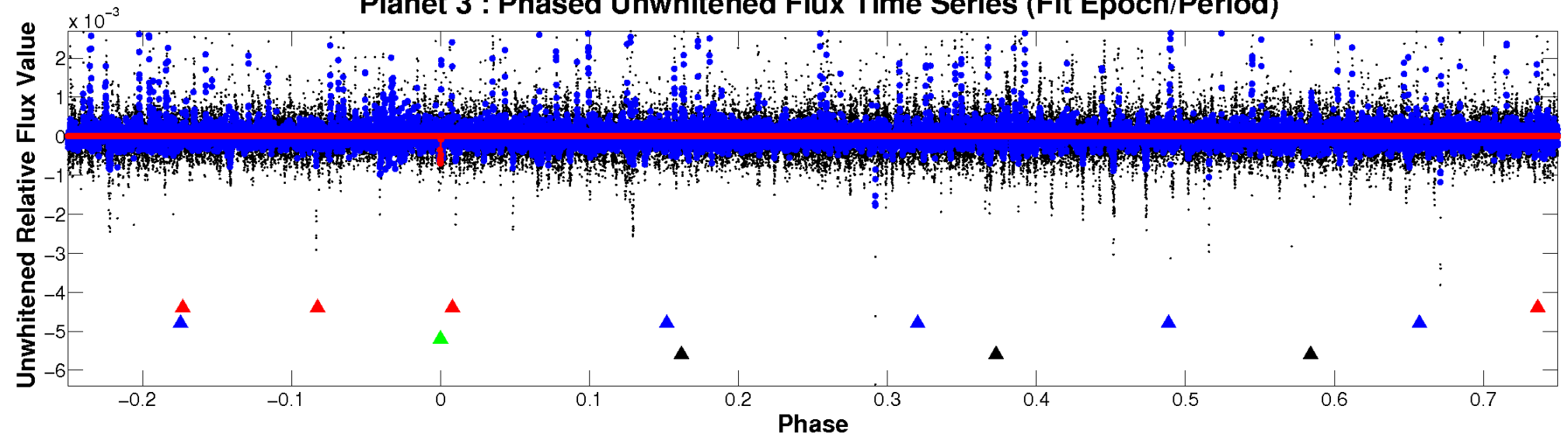
ALT Odd/Even

TCE 007902693-03

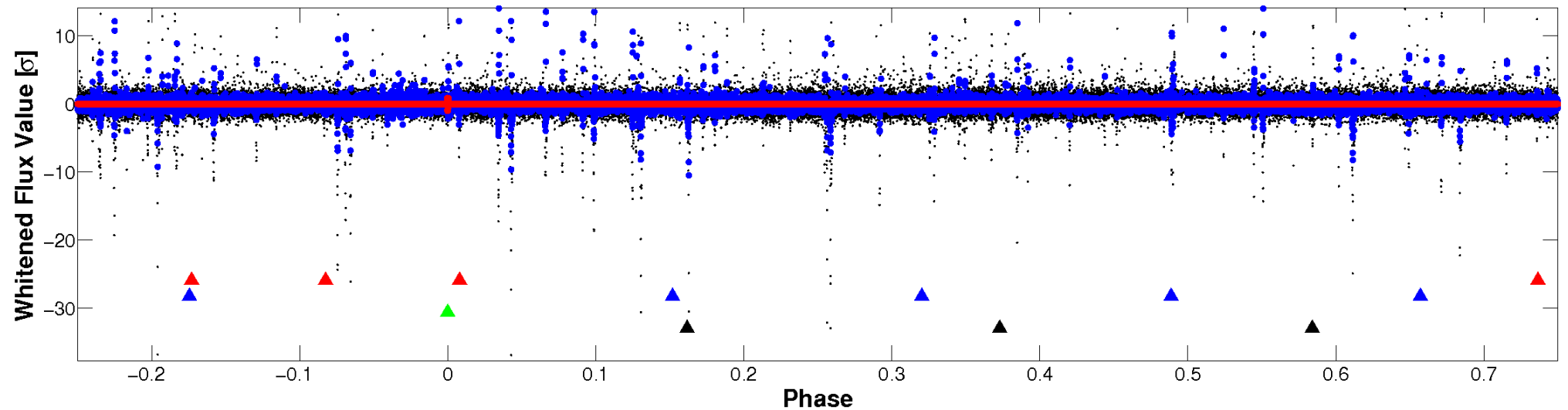


Non-Whitened Vs. Whitened Light Curve

Planet 3 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

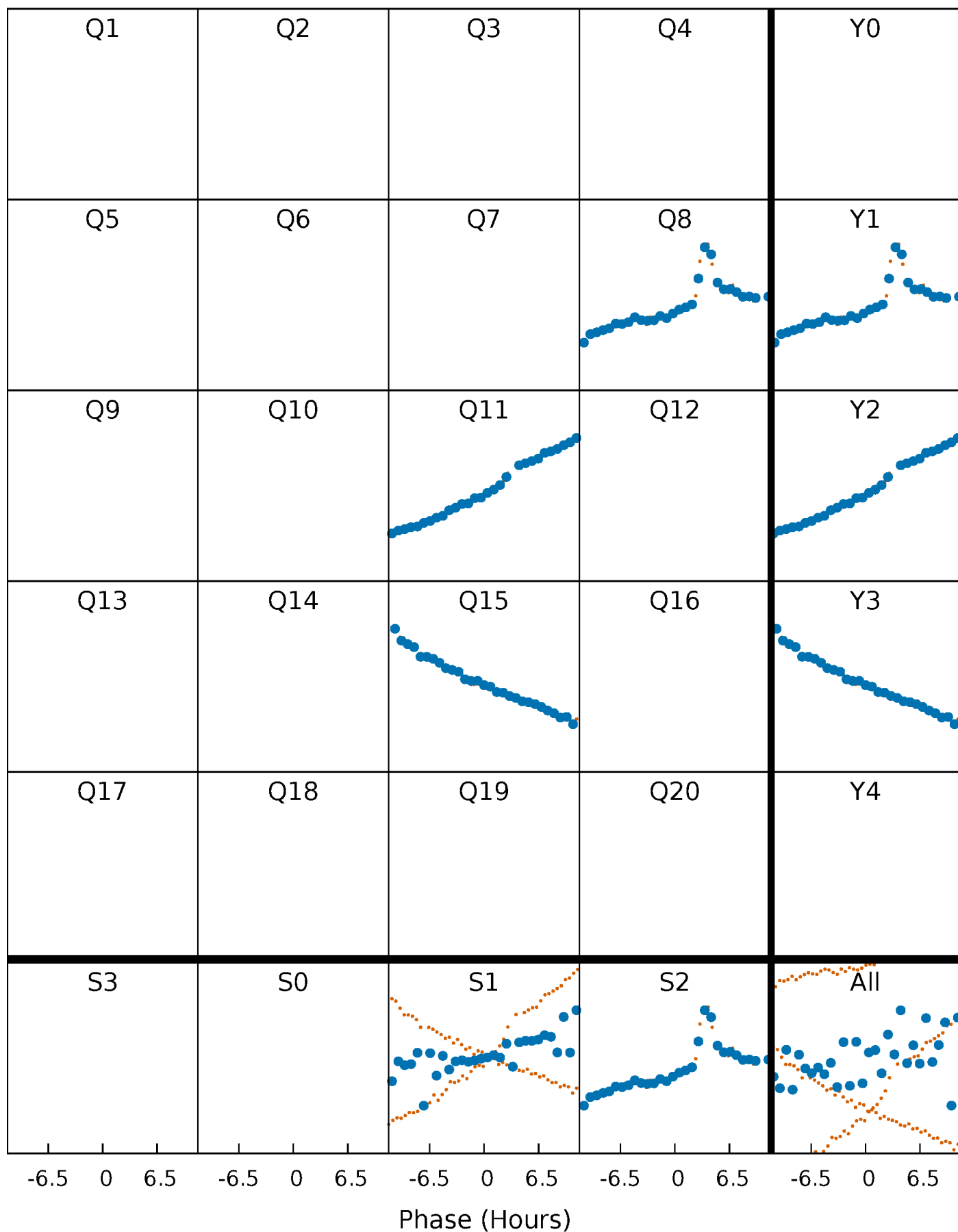


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



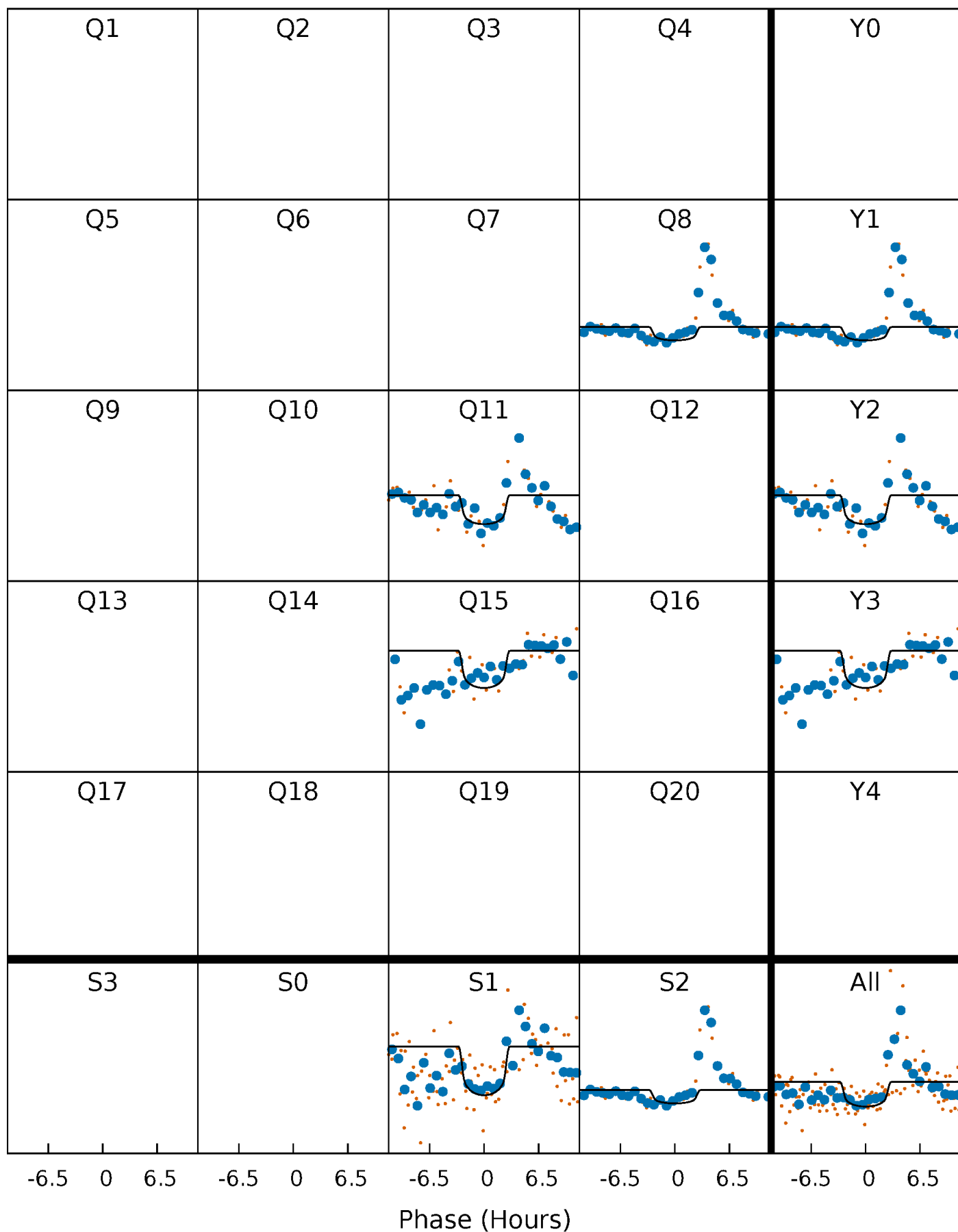
PDC Quarter-Phased Transit Curves

TCE 007902693-03 $P=342.719023$ Days $T_0=397.342097$ (BKJD)



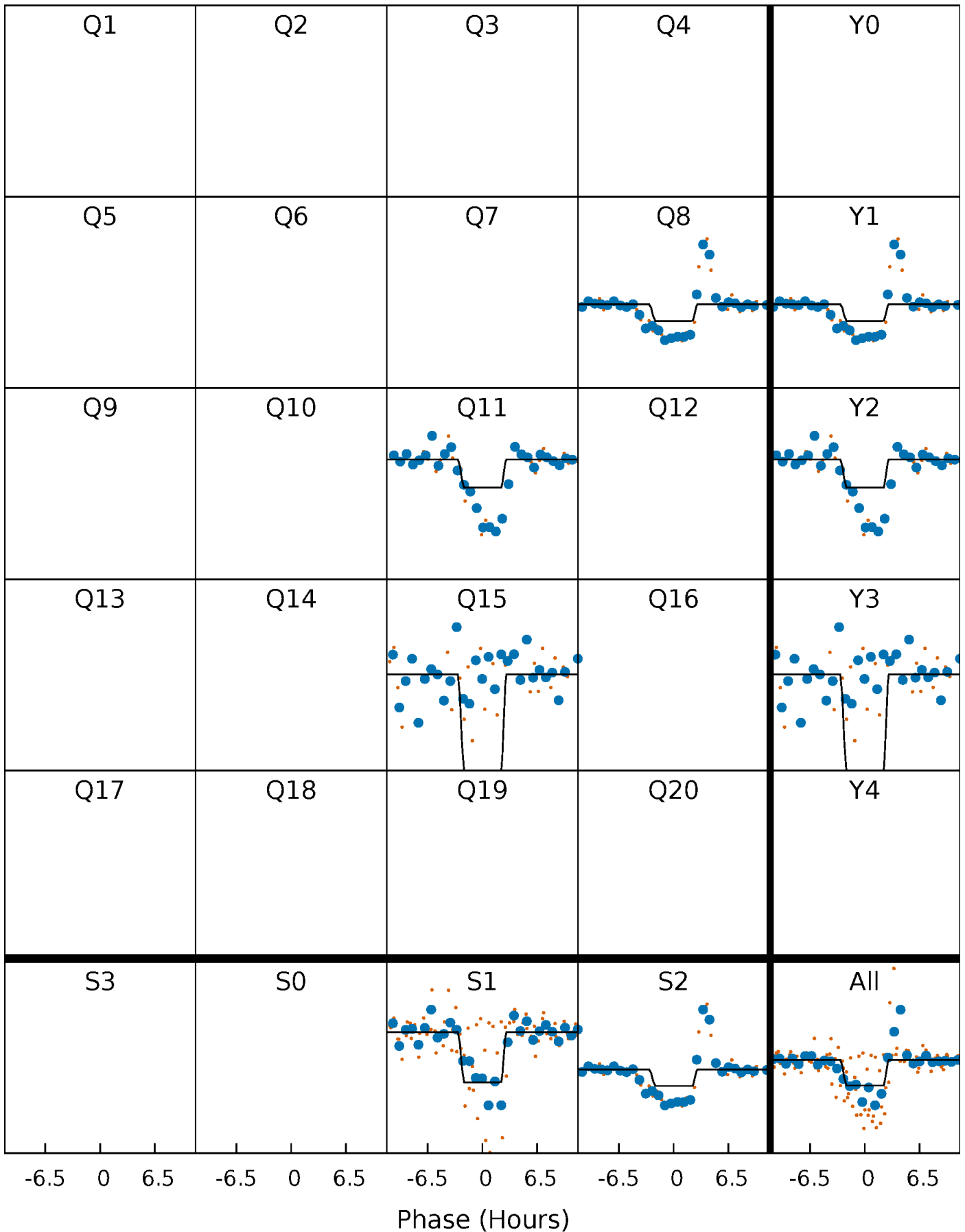
DV Quarter-Phased Transit Curves

TCE 007902693-03 $P=342.719023$ Days $T_0=397.342097$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

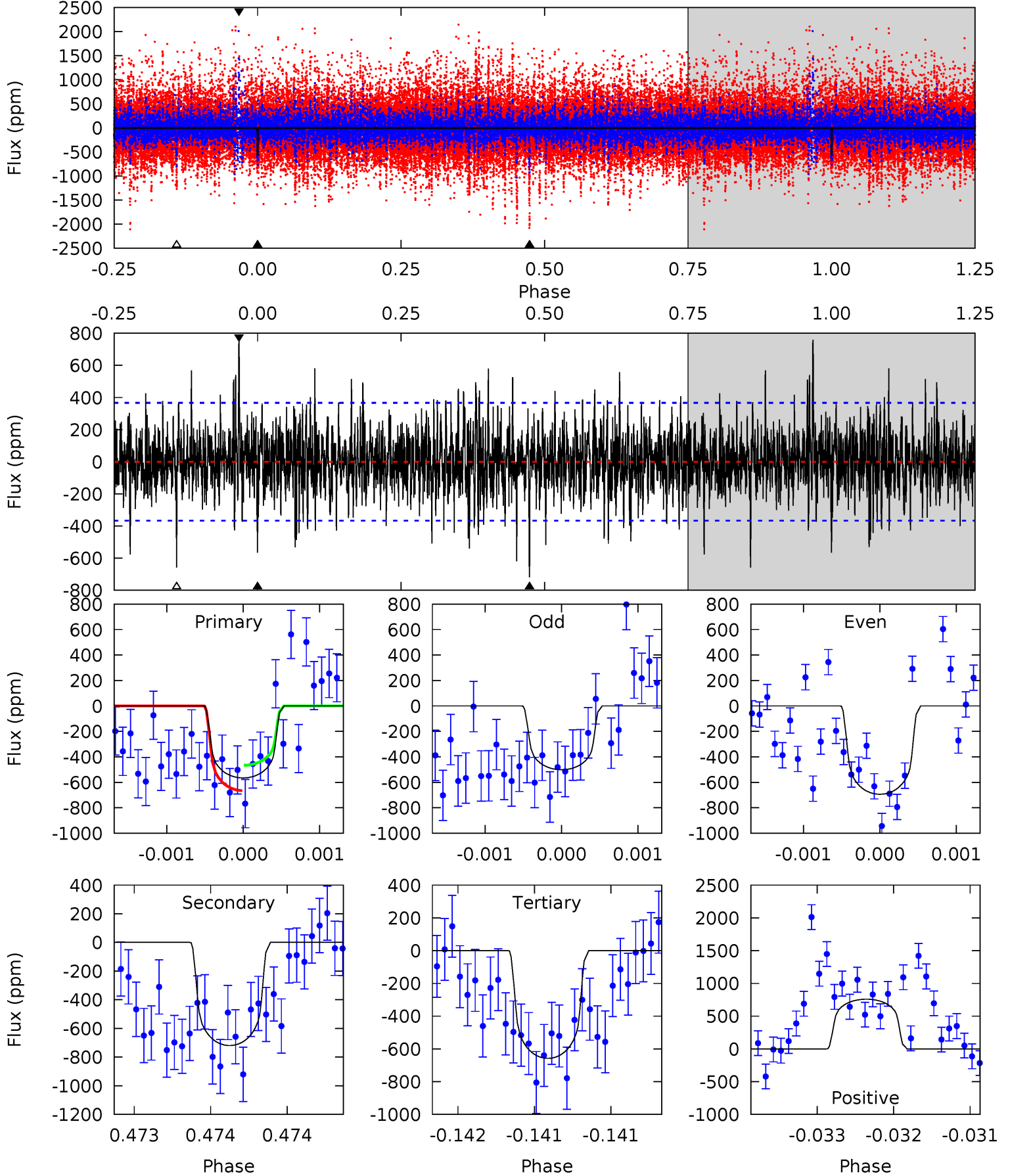
TCE 007902693-03 $P=342.718480$ Days $T_0=397.343358$ (BKJD)



DV Model-Shift Uniqueness Test

007902693-03, P = 342.719023 Days, E = 54.623074 Days

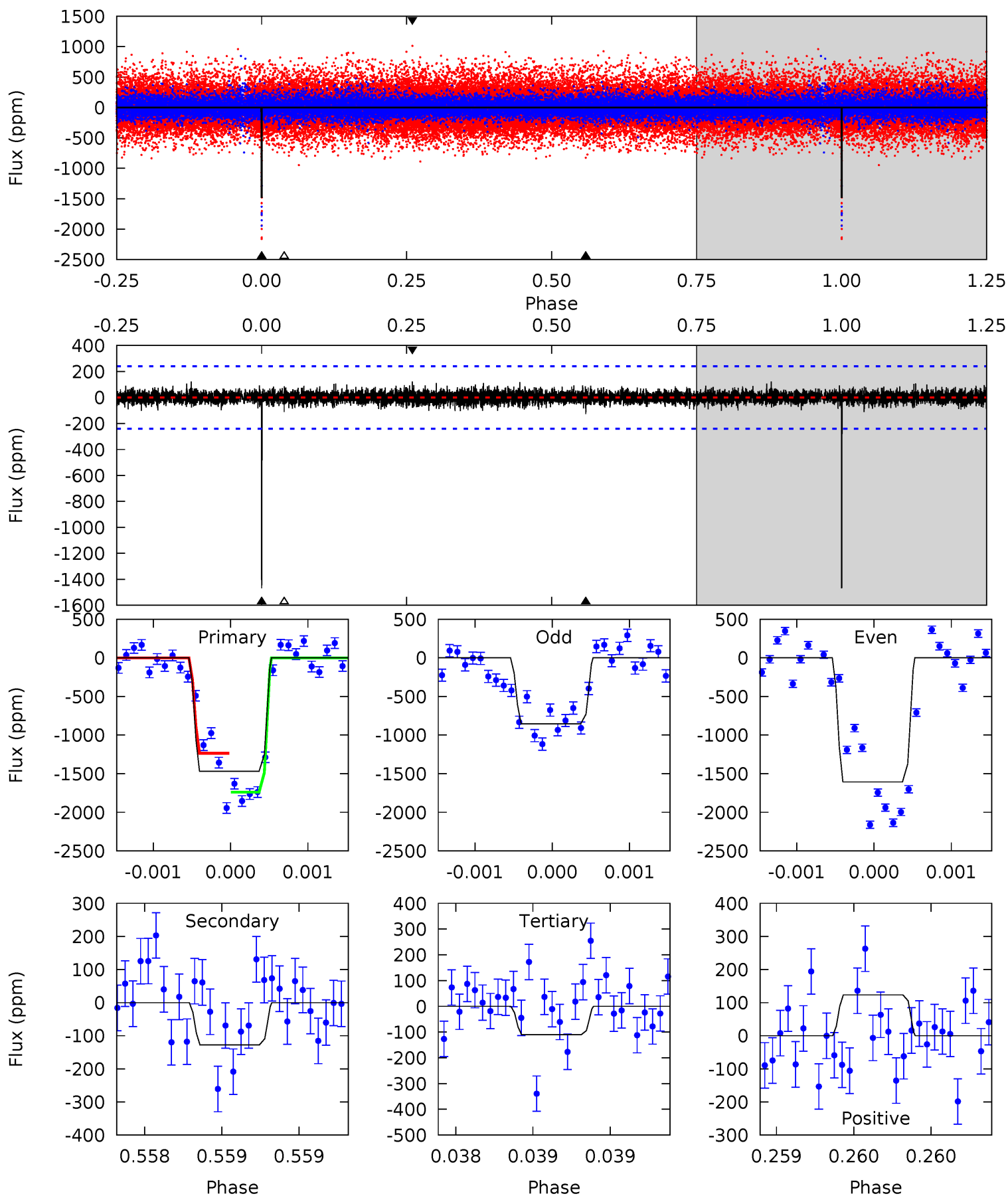
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.50	10.8	9.89	11.4	5.51	3.38	2.30	-1.39	-2.91	0.93	-0.59	1.08	1.06	0.51	1.51



Alt Model-Shift Uniqueness Test

007902693-03, $P = 342.718480$ Days, $E = 54.624878$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.8	2.93	2.54	2.84	5.53	3.41	0.61	31.2	30.9	0.39	0.09	9.26	0.70	0.08	5.79



Stellar Parameters For KIC 007902693

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5100^{+167}_{-152}	$4.664^{+0.054}_{-0.032}$	$-1.160^{+0.300}_{-0.300}$	$0.594^{+0.040}_{-0.040}$	$0.594^{+0.047}_{-0.022}$	$3.986^{+0.837}_{-0.516}$
	+3%/-3%	+1%/-1%	+26%/-26%	+7%/-7%	+8%/-4%	+21%/-13%
Source	PHO1	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 007902693-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-720 ± 67	$1.82^{+1.18}_{-1.08}$	268^{+9}_{-9}	4969^{+2874}_{-887}	$78375^{+377436}_{-50631}$
Alt.	-127 ± 43	$1.93^{+1.26}_{-1.03}$	268^{+10}_{-9}	3508^{+1215}_{-504}	11127^{+49367}_{-7133}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

DV Centroid Data

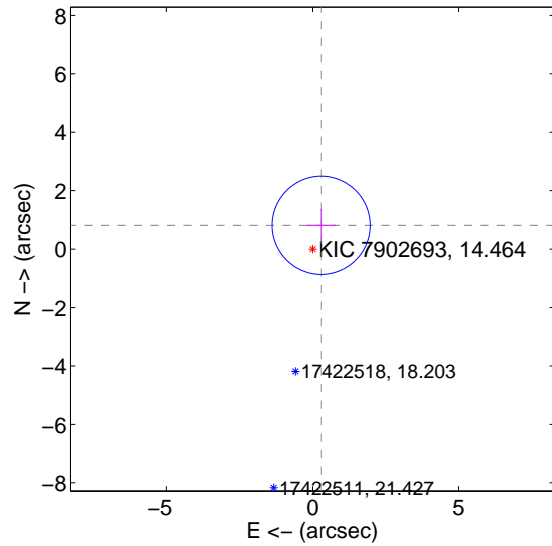
Supplemental centroid analysis for 007902693-03. Kepler magnitude: 14.46. Transit SNR 6.04

There are 1 quarters with good PRF difference image offsets

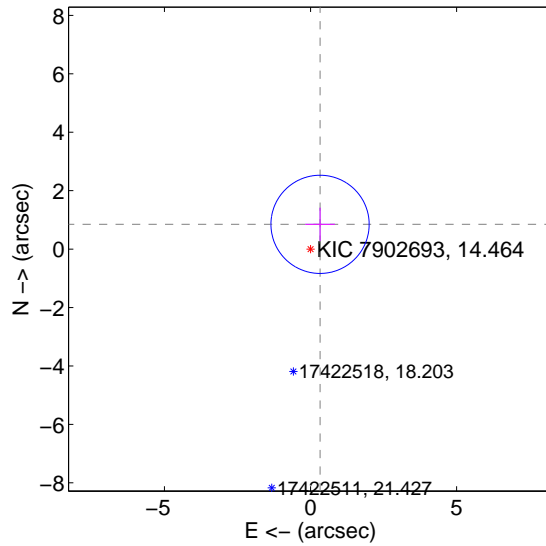
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.868 ± 0.561	1.55	-0.299 ± 0.507	0.815 ± 0.568
PRF-fit source offset from KIC position	0.908 ± 0.560	1.62	-0.326 ± 0.507	0.848 ± 0.568
photometric centroid source offset	1.49 ± 1.80	0.83	0.43 ± 0.98	1.43 ± 1.86

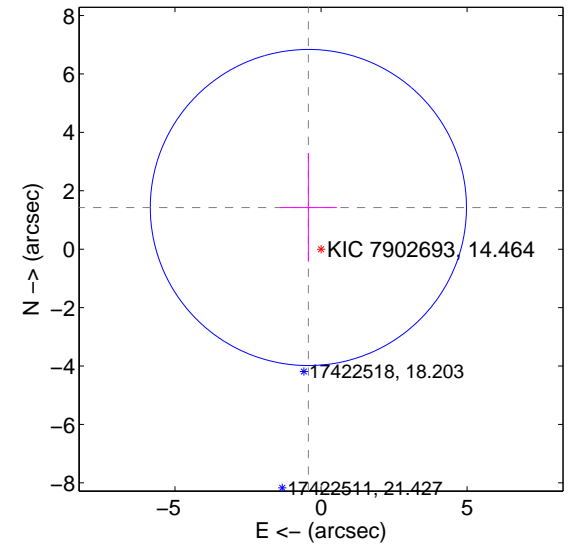
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

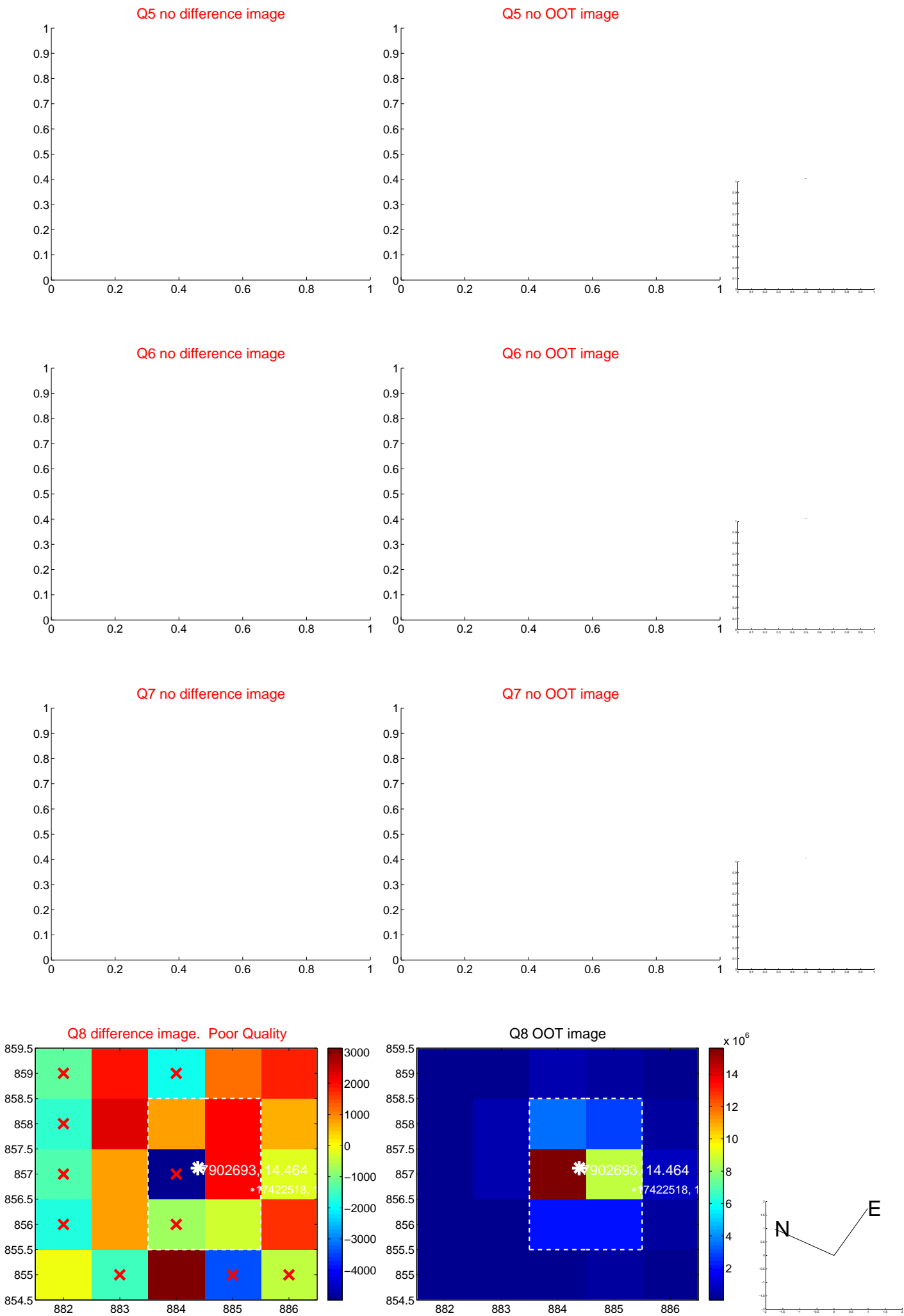


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

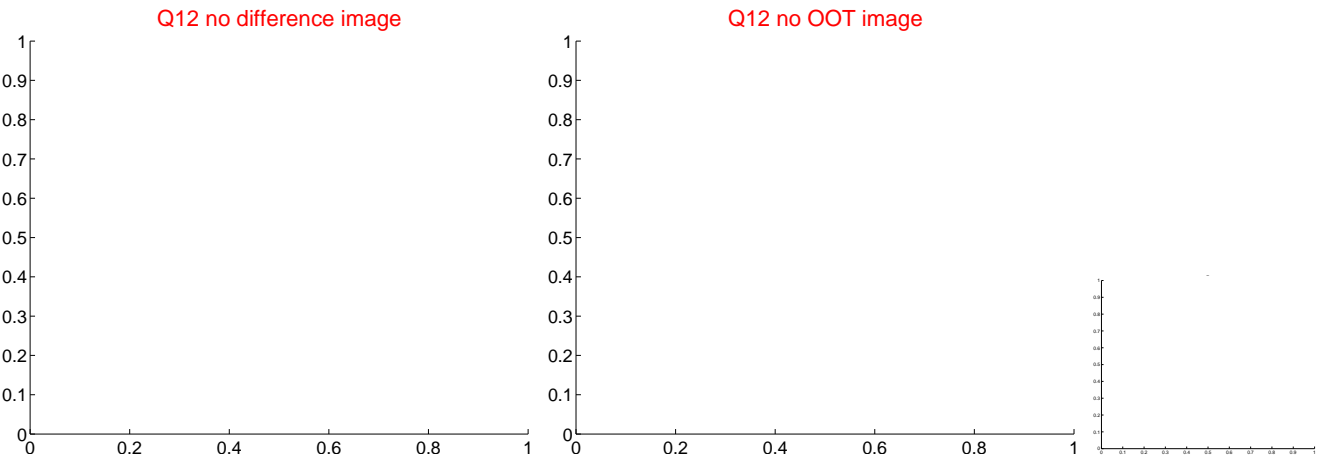
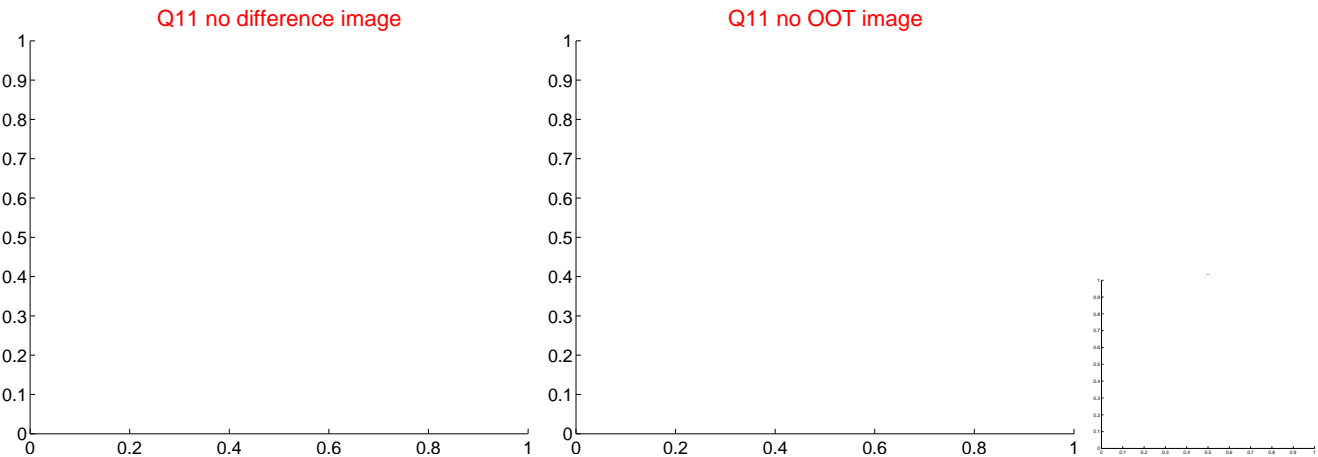
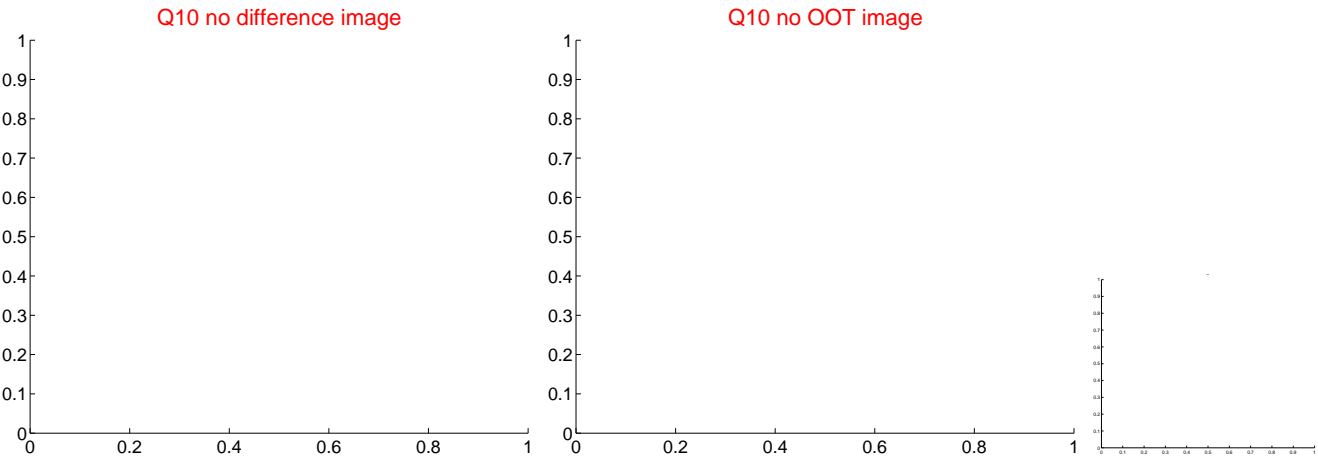
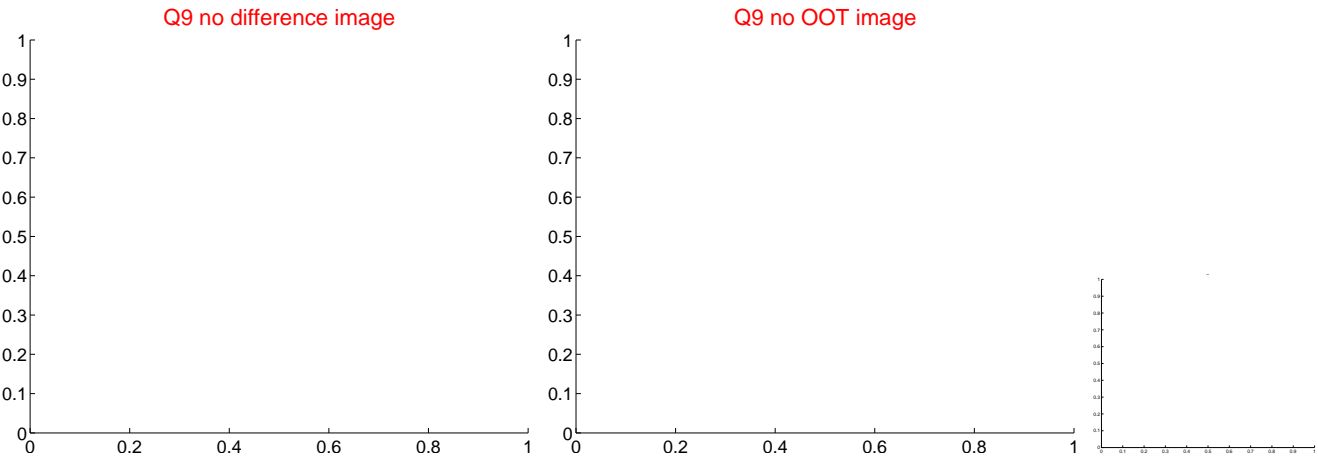
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

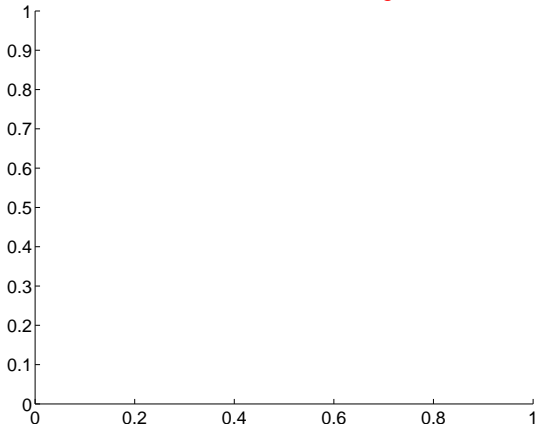


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

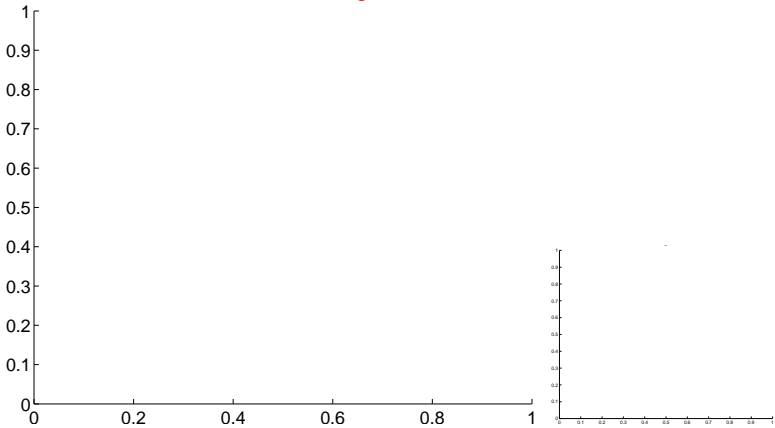


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

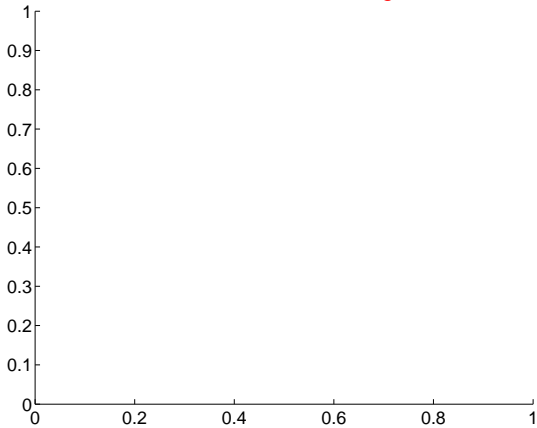
Q13 no difference image



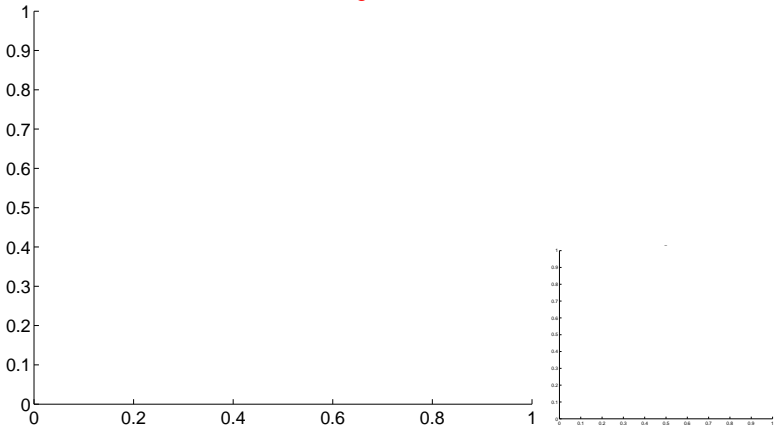
Q13 no OOT image



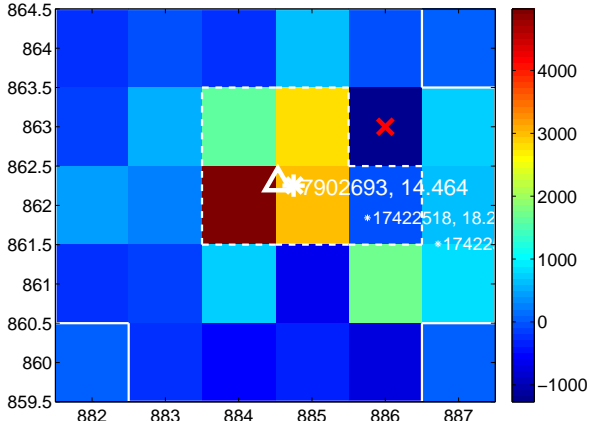
Q14 no difference image



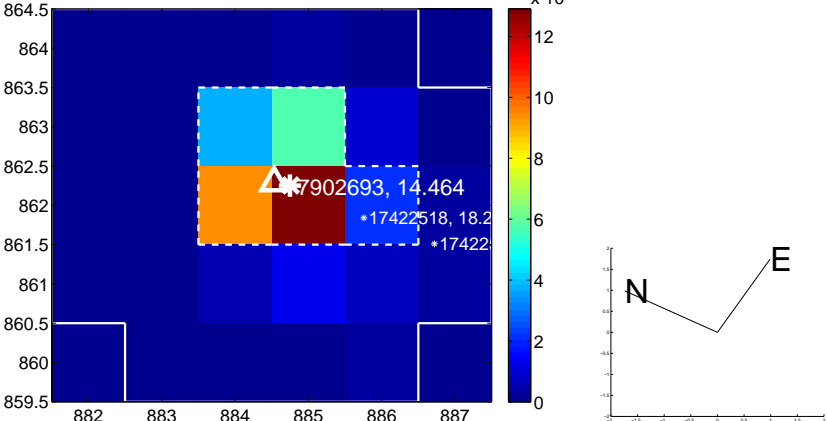
Q14 no OOT image



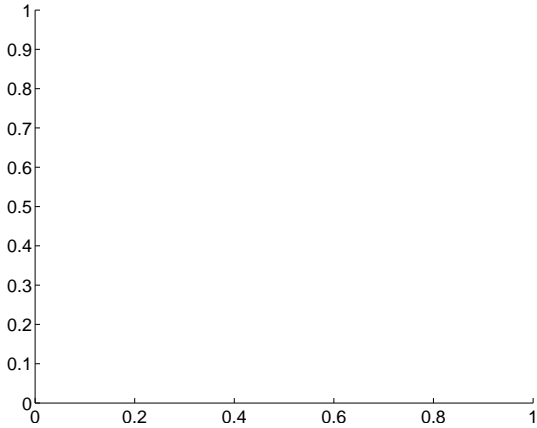
Q15 difference image



Q15 OOT image



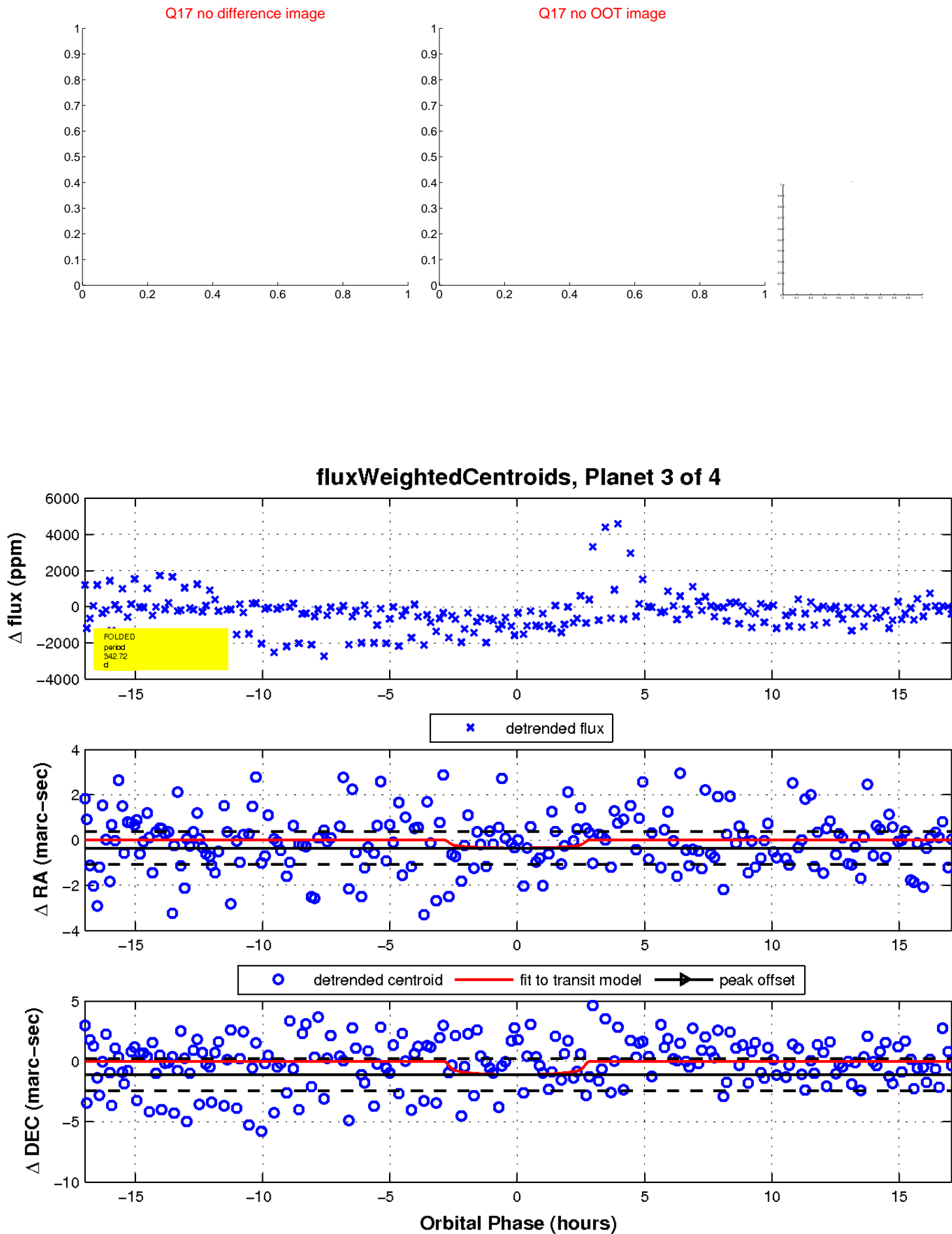
Q16 no difference image



Q16 no OOT image

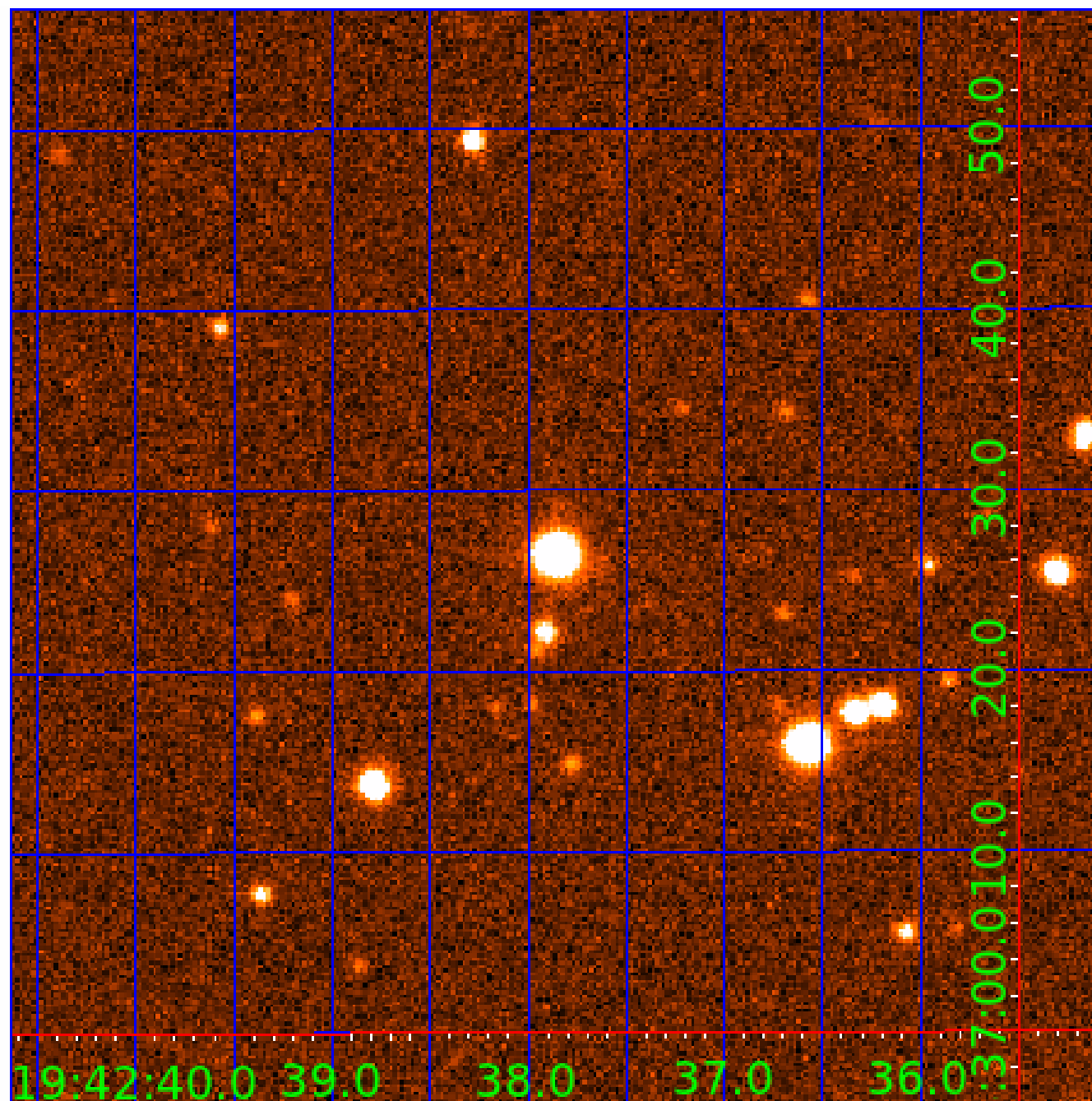


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007902693

Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	R_{\star} (R_{\odot})	T_{\star} (K)	R_p (R_{\oplus})	S_p (S_{\oplus})
007902693-02	OBS	No	285.001002	337.547351	997.9	6.855	14.5	7.9	0.59	5100	2.15	0.42
007902693-03	OBS	No	342.719023	397.342097	700.0	5.694	10.2	6.0	0.59	5100	1.71	0.33
007902693-04	OBS	No	415.088321	452.782122	1096.7	4.678	18.4	8.0	0.59	5100	1.95	0.26

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007902693-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007902693-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007902693-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS

Notes: OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

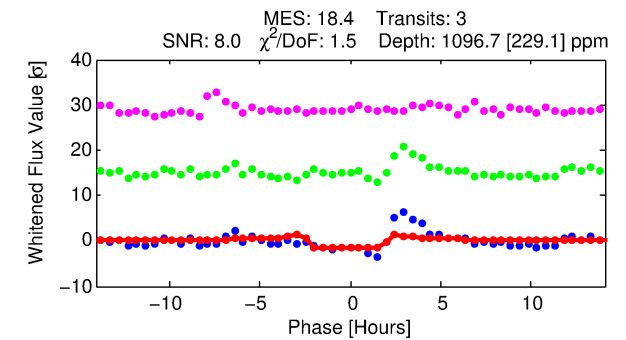
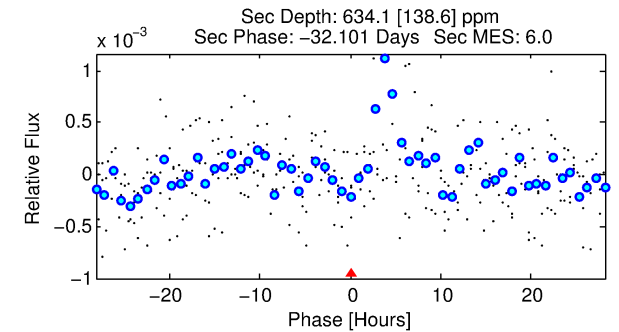
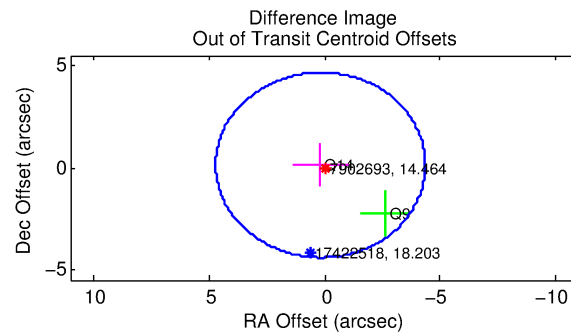
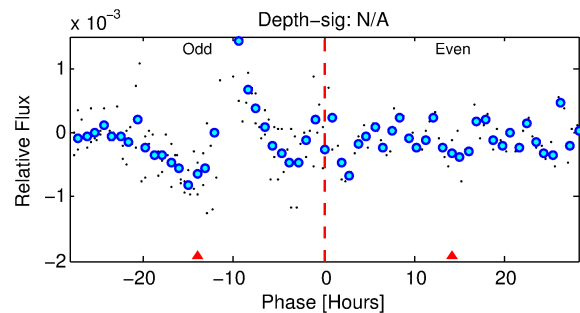
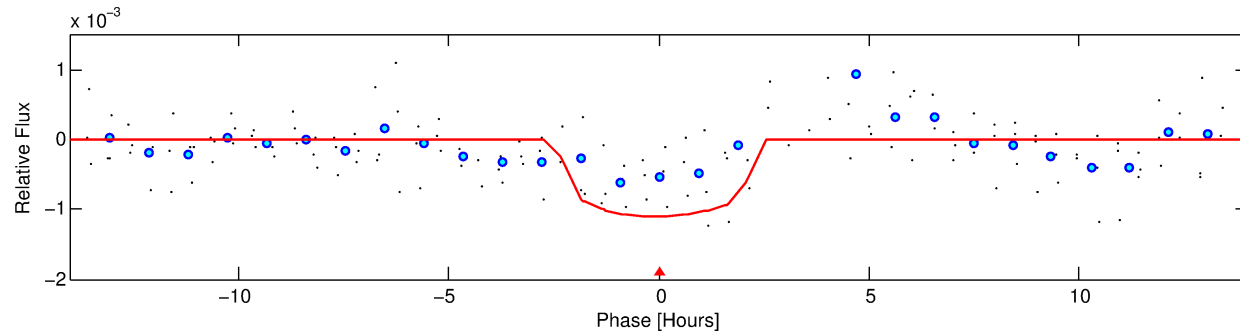
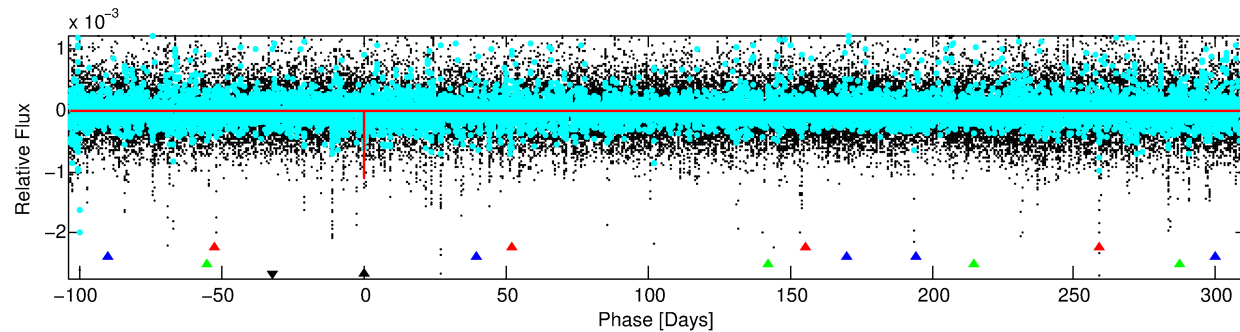
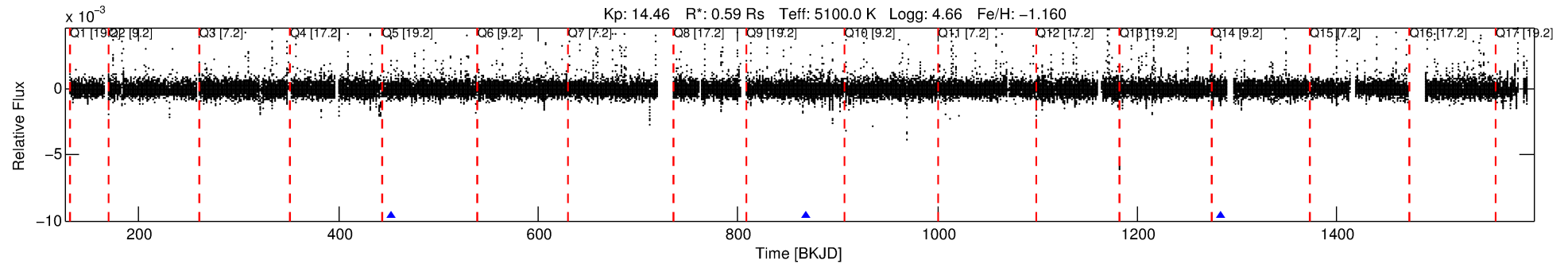
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007902693-04

No Significant Match Found

DV One-Page Summary

KIC: 7902693 Candidate: 4 of 4 Period: 415.088 d



DV Fit Results:

Period = 415.08832 [0.00589] d
Epoch = 452.7821 [0.0081] BKJD
Rp/R* = 0.0300 [0.1259]
a/R* = 698.18 [12886.30]
b = 0.01 [1462.30]
Seff = 0.26 [0.04]
Teq = 181 [7] K
Rp = 1.95 [8.16] Re
a = 0.9155 [0.0559] AU
Ag = 77213.29 [647849.95] [0.12 σ]
Teffp = 4671 [9798] K [0.46 σ]

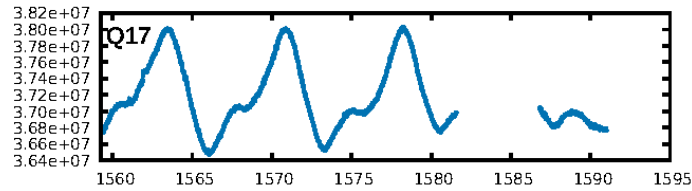
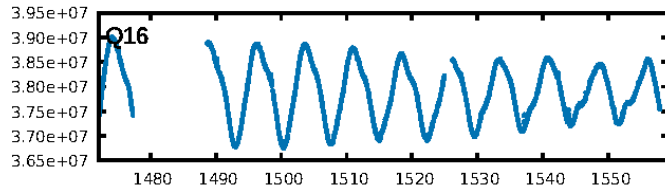
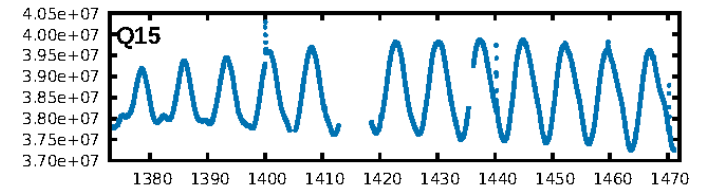
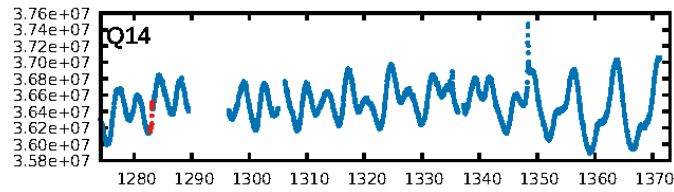
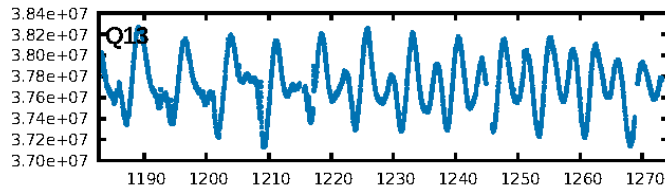
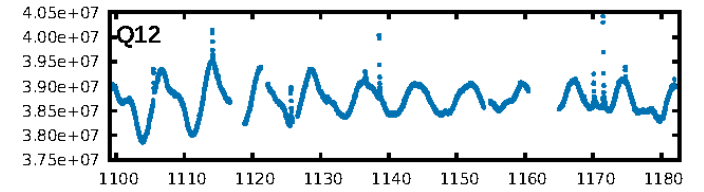
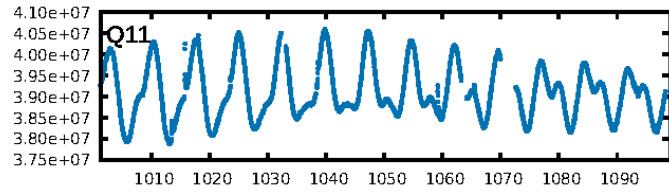
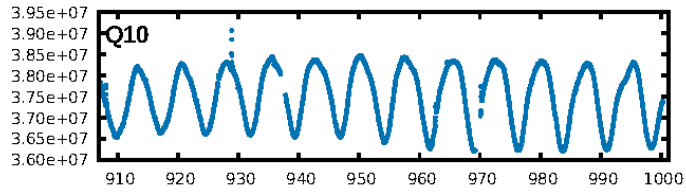
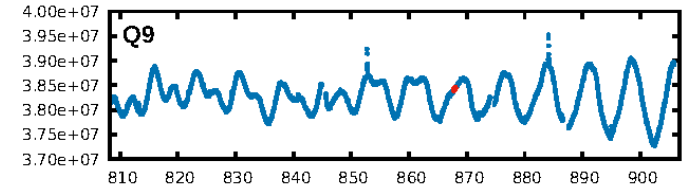
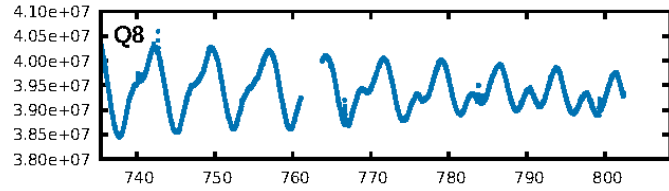
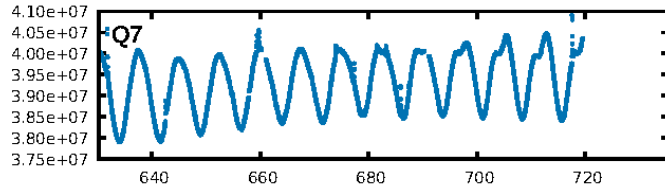
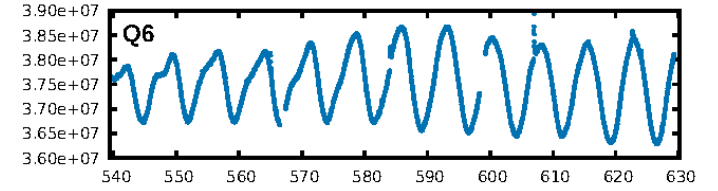
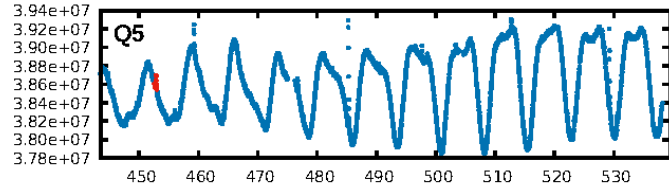
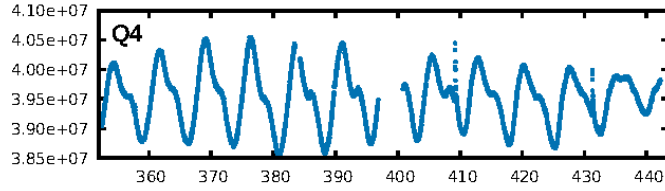
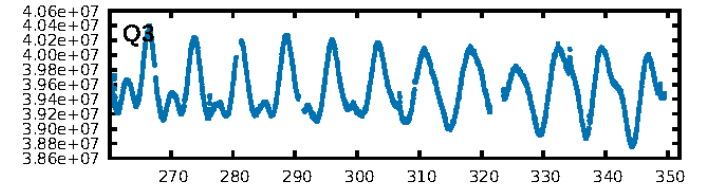
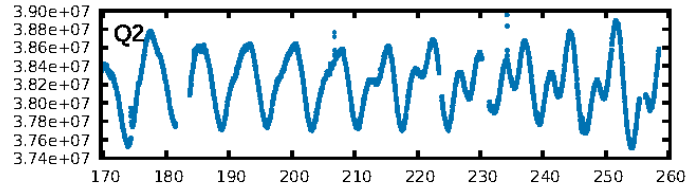
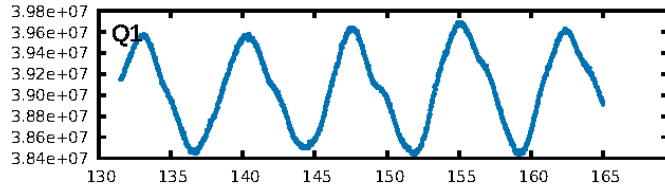
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [235.69 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 31.8%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.492
Centroid-sig: 42.1%
Centroid-so: 0.646 arcsec [0.83 σ]
OotOffset-rm: 0.216 arcsec [0.14 σ]
OotOffset-st: 1/0/0/1 [2]
KicOffset-rm: 0.233 arcsec [0.19 σ]
KicOffset-st: 1/0/0/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

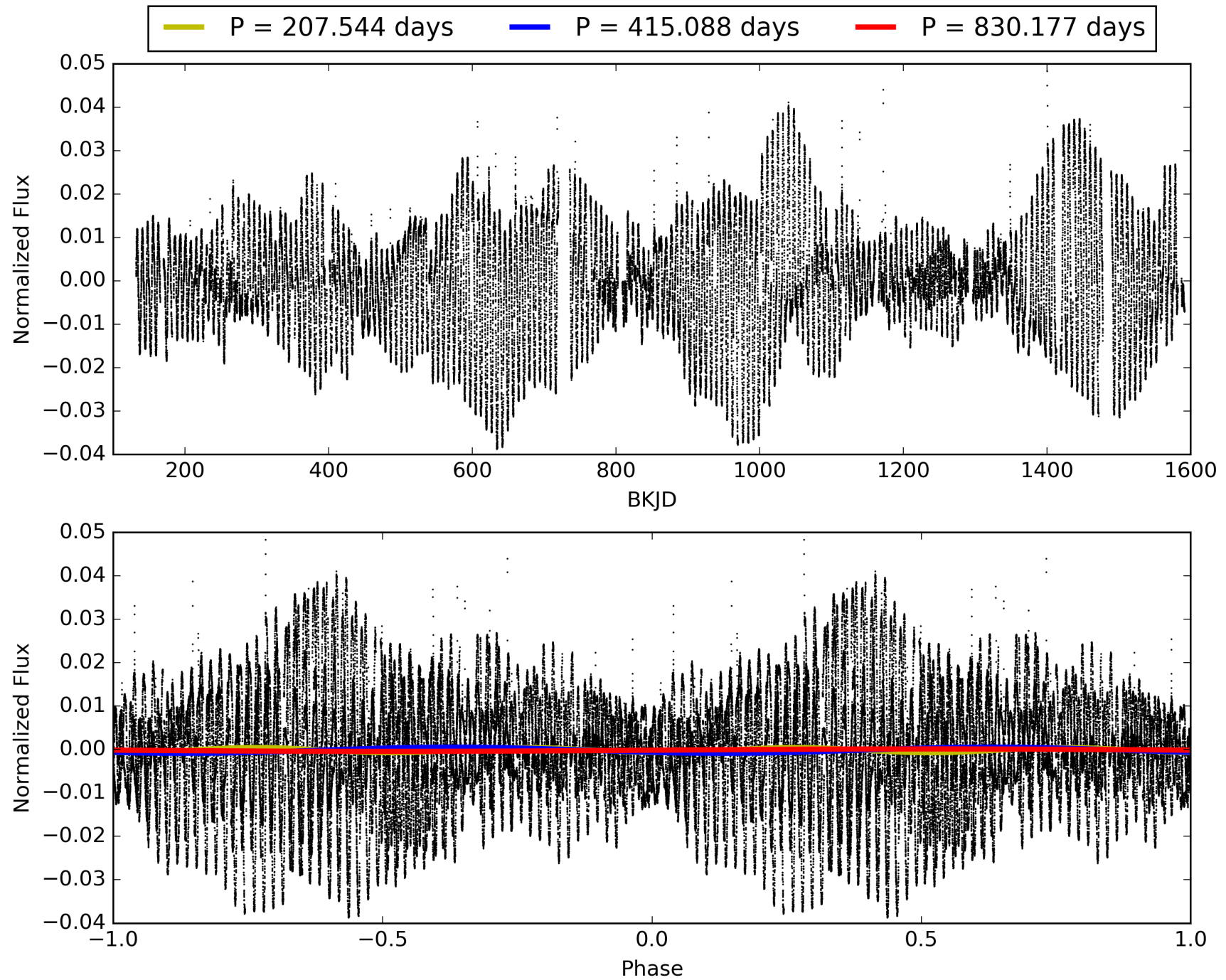
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 09:35:55 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 007902693-04, PDC Light Curves

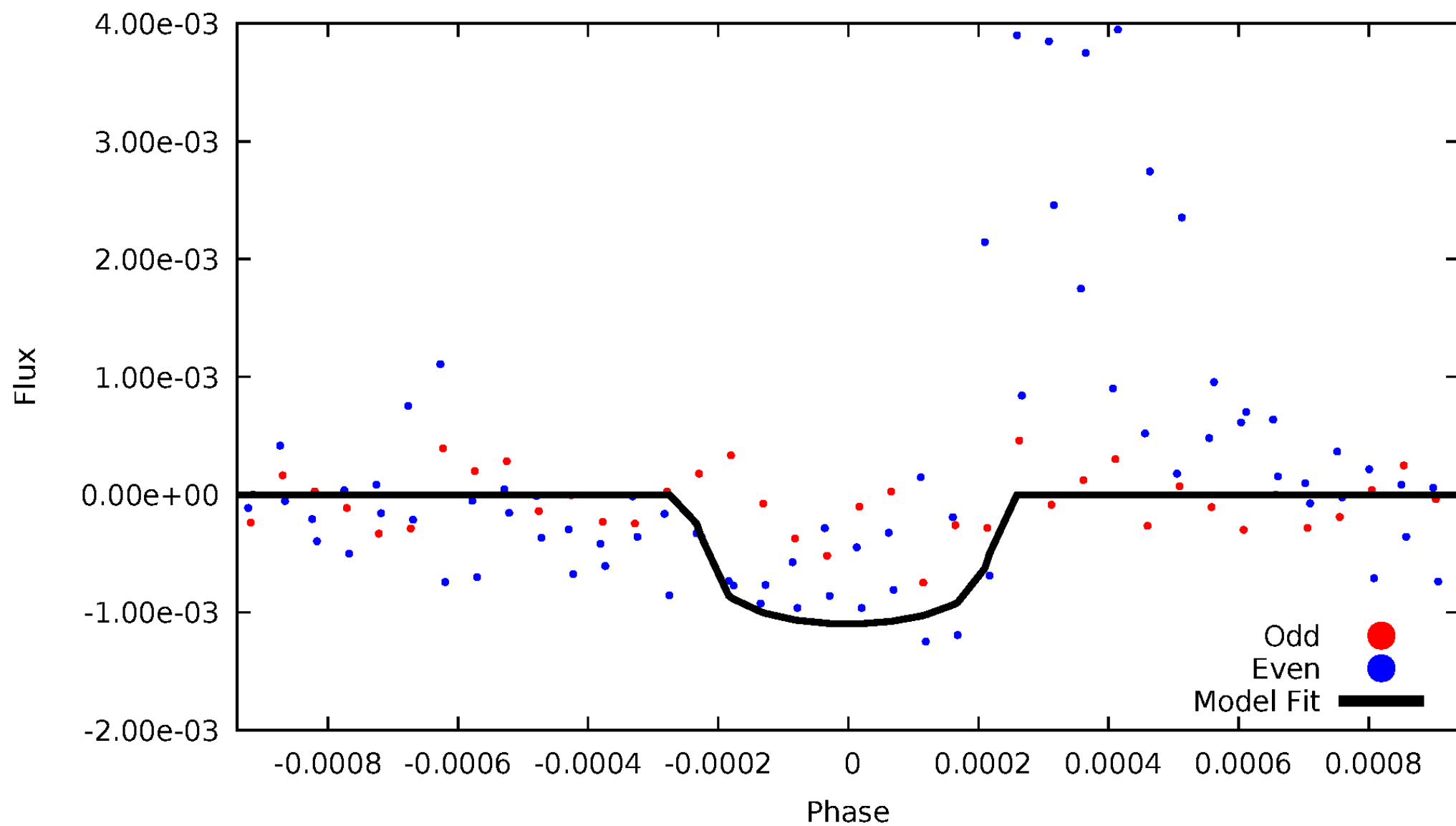


TCE 007902693-04



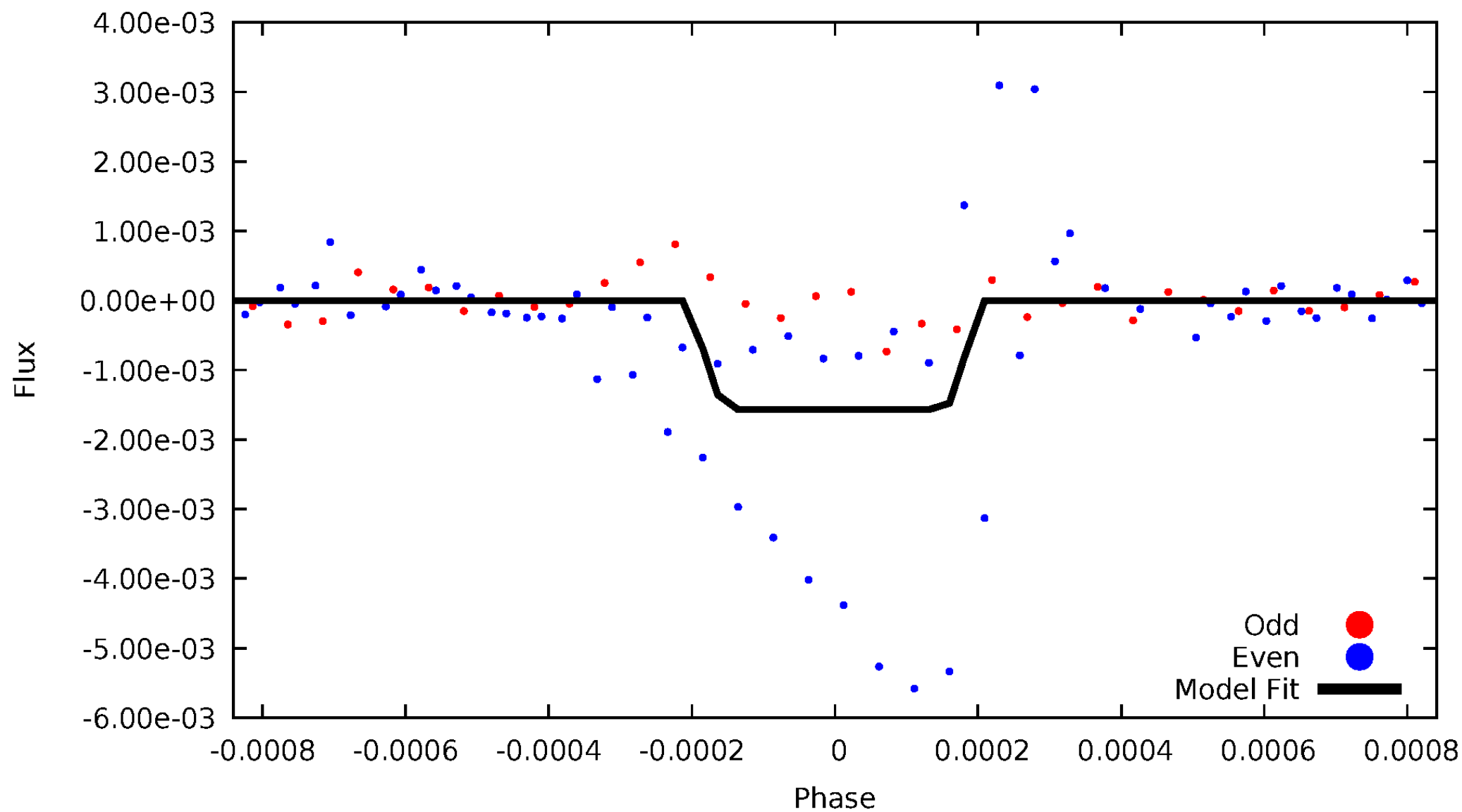
DV Odd/Even

TCE 007902693-04



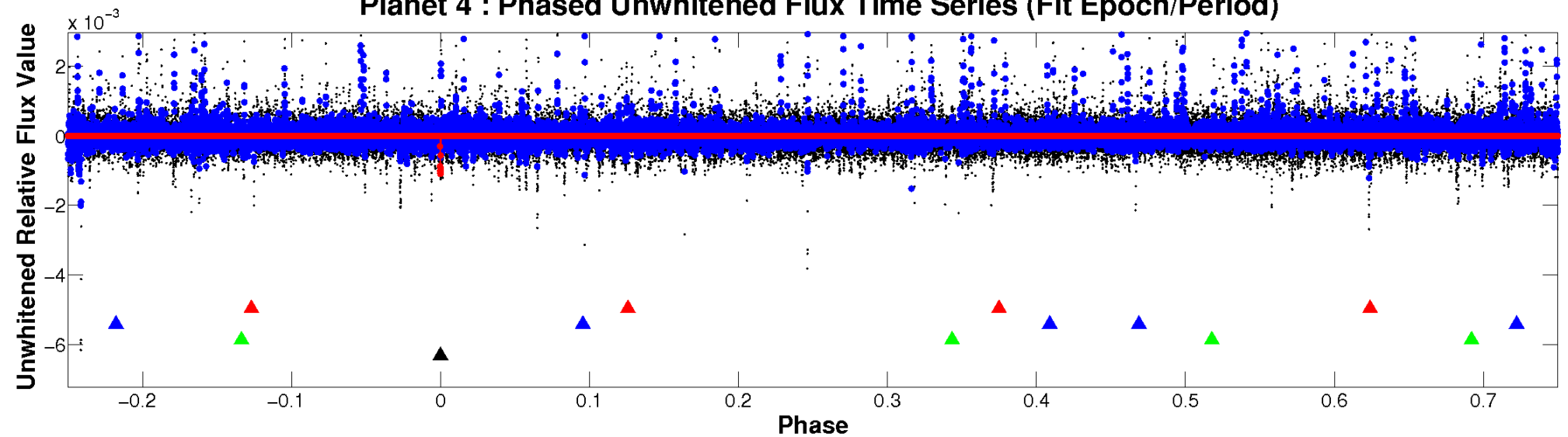
ALT Odd/Even

TCE 007902693-04

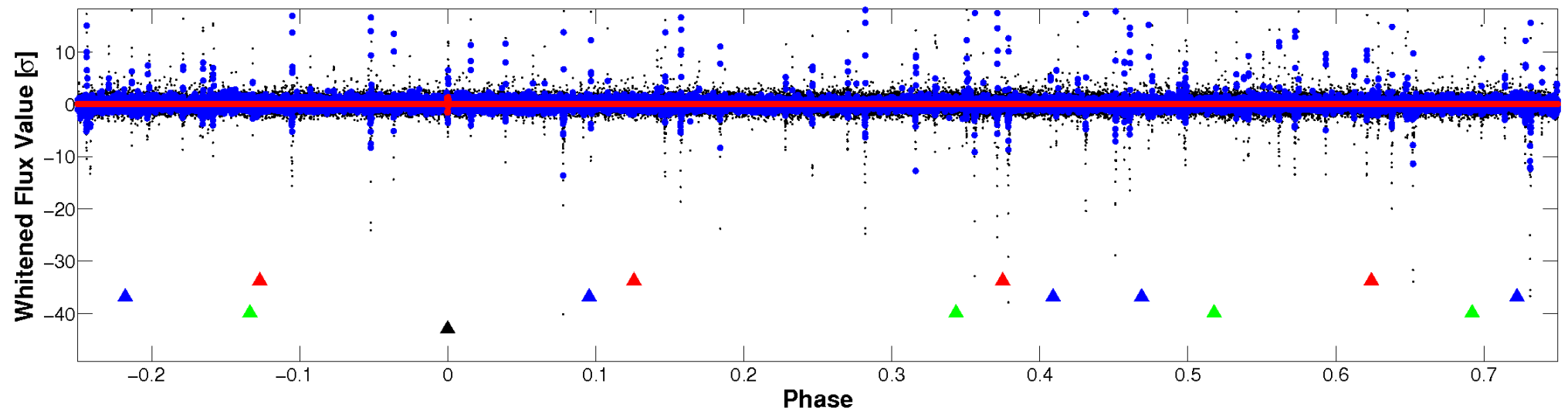


Non-Whitened Vs. Whitened Light Curve

Planet 4 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

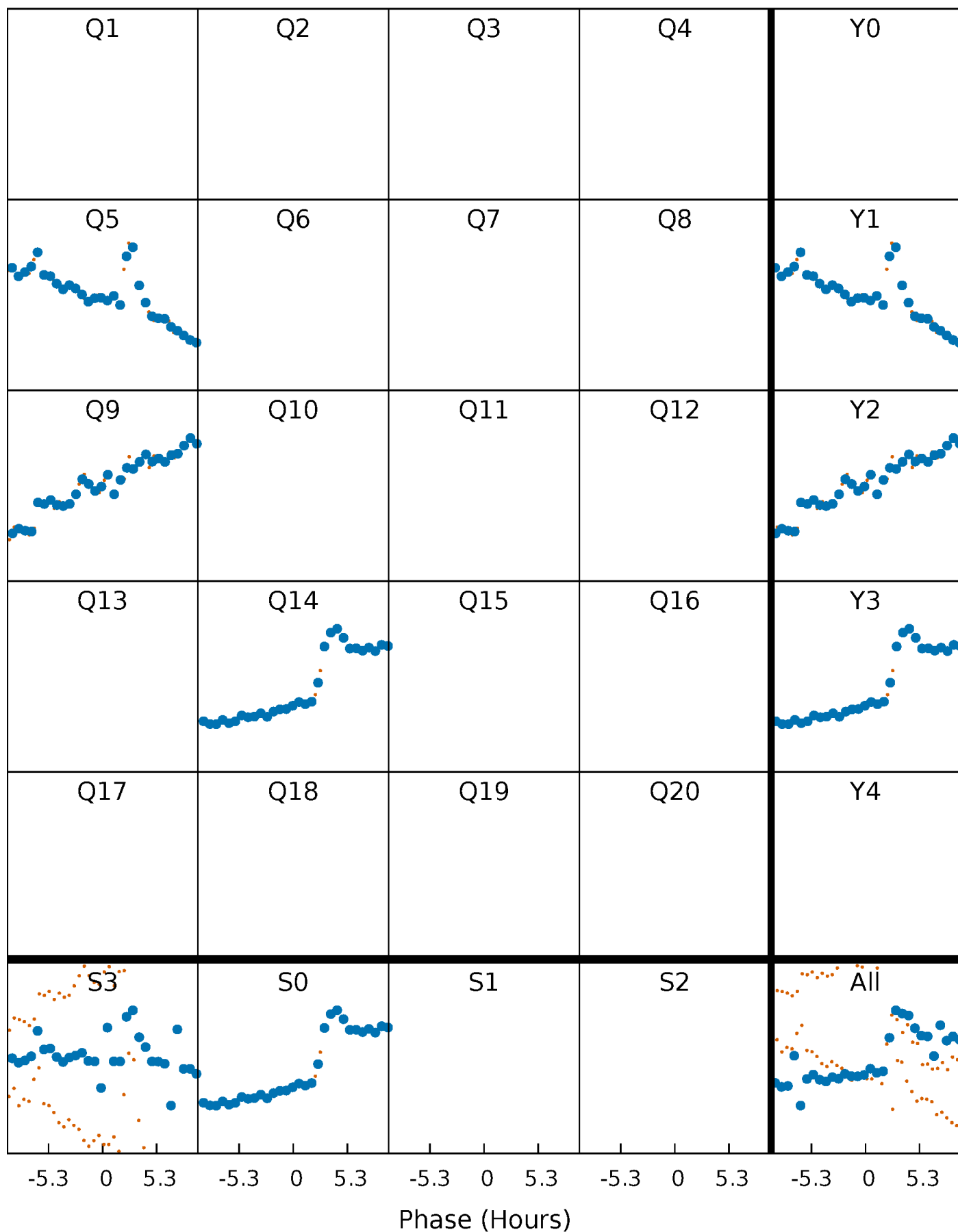


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



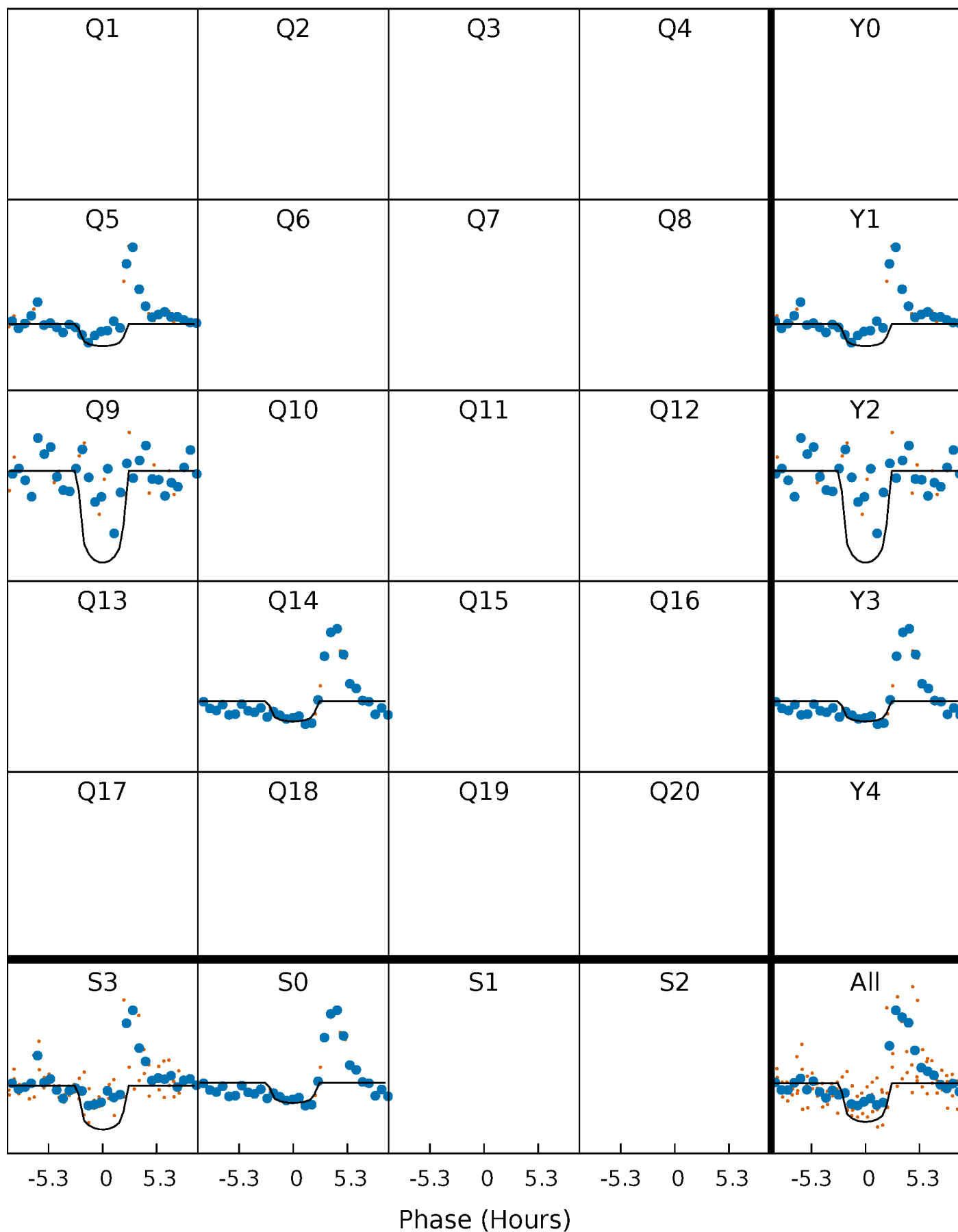
PDC Quarter-Phased Transit Curves

TCE 007902693-04 P=415.088321 Days $T_0=452.782122$ (BKJD)



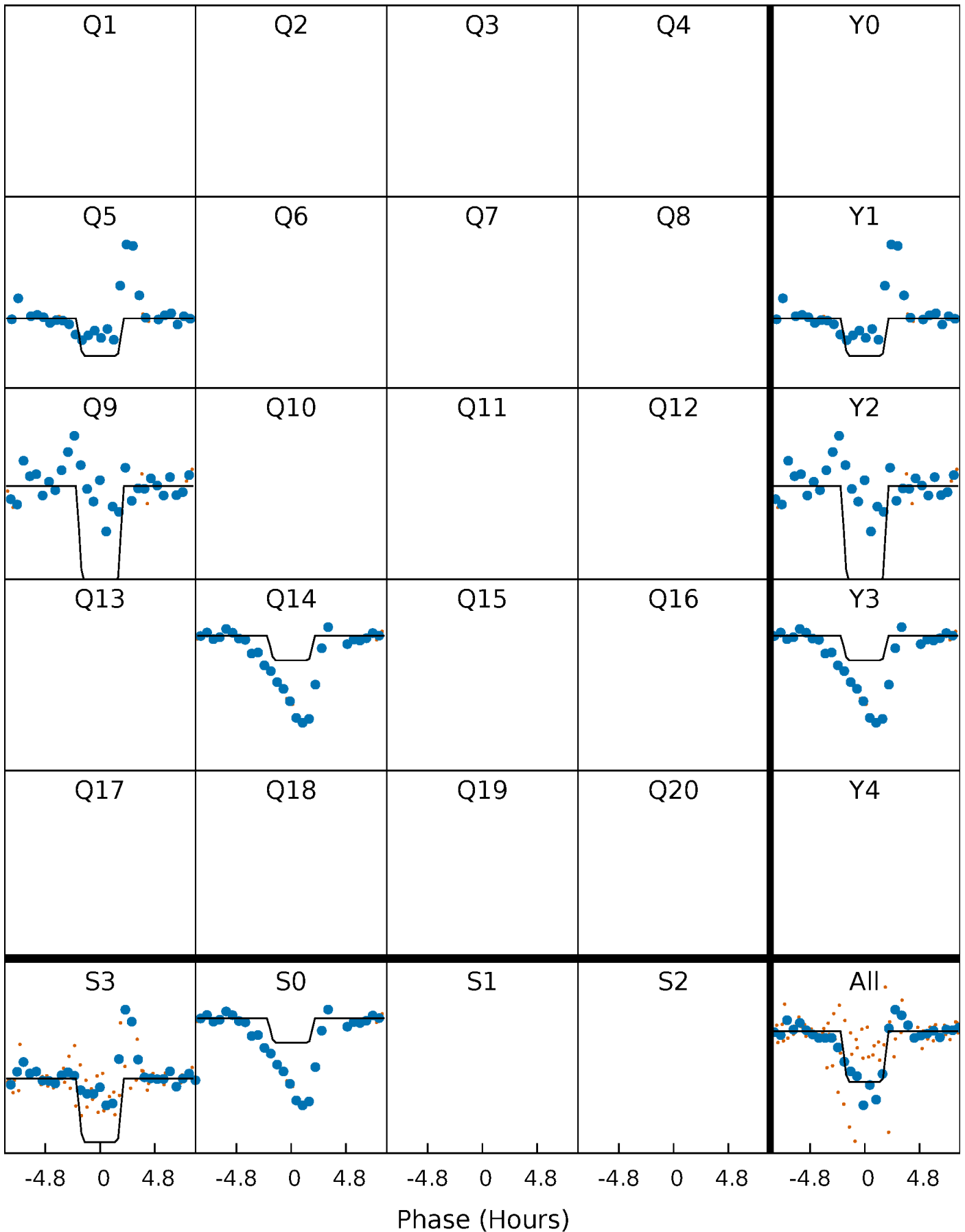
DV Quarter-Phased Transit Curves

TCE 007902693-04 $P=415.088321$ Days $T_0=452.782122$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

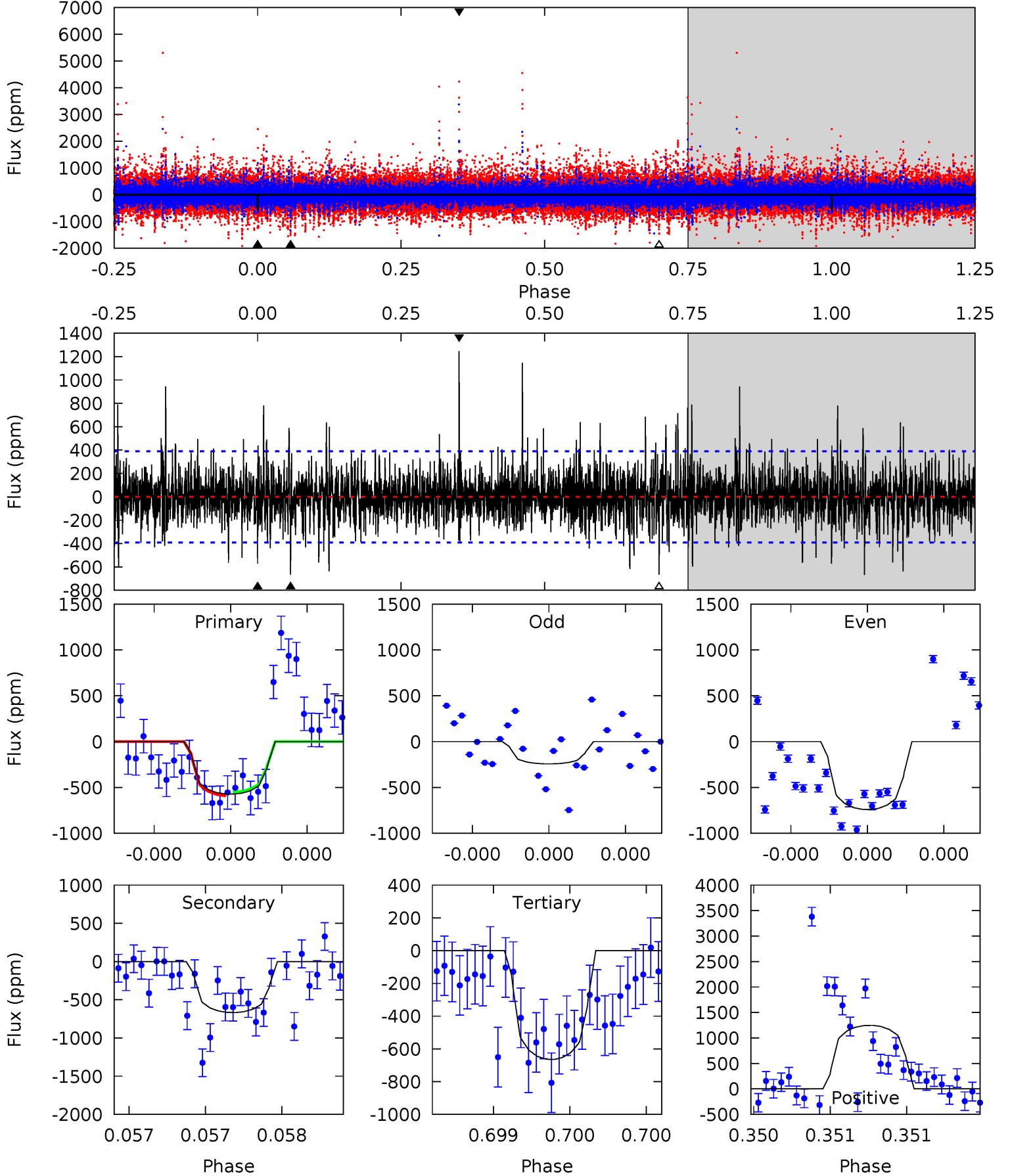
TCE 007902693-04 P=415.094149 Days $T_0=452.794261$ (BKJD)



DV Model-Shift Uniqueness Test

007902693-04, P = 415.088321 Days, E = 37.693801 Days

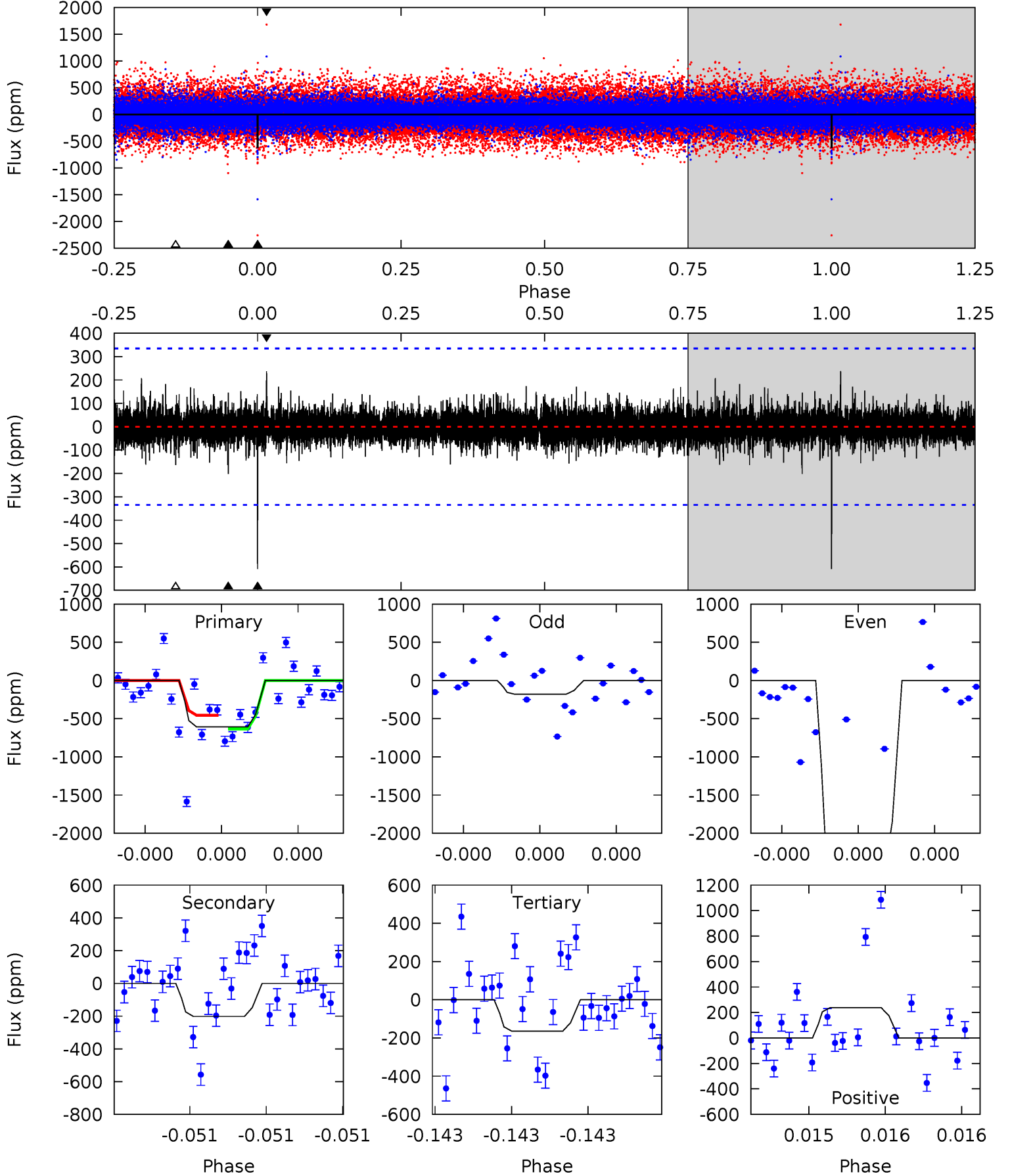
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.20	9.55	9.51	17.9	5.59	3.51	2.13	-1.32	-9.67	0.04	-8.31	2.65	1.97	0.65	0.28



Alt Model-Shift Uniqueness Test

007902693-04, P = 415.094149 Days, E = 37.700112 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.2	3.39	2.75	3.99	5.62	3.55	0.64	7.46	6.22	0.63	-0.60	22.8	2.89	0.28	1.50



Stellar Parameters For KIC 007902693

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5100^{+167}_{-152}	$4.664^{+0.054}_{-0.032}$	$-1.160^{+0.300}_{-0.300}$	$0.594^{+0.040}_{-0.040}$	$0.594^{+0.047}_{-0.022}$	$3.986^{+0.837}_{-0.516}$
	+3%/-3%	+1%/-1%	+26%/-26%	+7%/-7%	+8%/-4%	+21%/-13%
Source	PHO1	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 007902693-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-668 ± 70	$6.40^{+6.54}_{-4.50}$	253^{+8}_{-9}	3162^{+1657}_{-547}	7575^{+80453}_{-5724}
Alt.	-202 ± 60	$6.36^{+6.59}_{-4.47}$	252^{+10}_{-9}	2702^{+1166}_{-450}	2336^{+24799}_{-1801}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

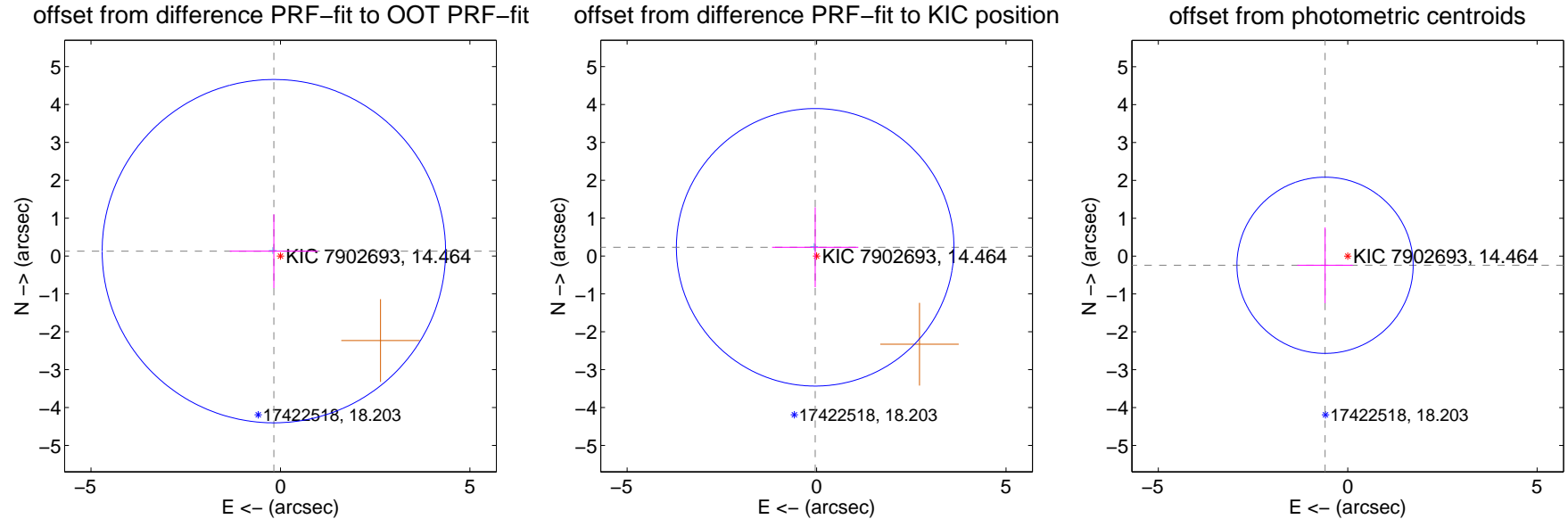
DV Centroid Data

Supplemental centroid analysis for 007902693-04. Kepler magnitude: 14.46. Transit SNR 8.02

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.216 ± 1.510	0.14	0.174 ± 1.162	0.128 ± 0.972
PRF-fit source offset from KIC position	0.233 ± 1.221	0.19	0.037 ± 1.137	0.230 ± 1.054
photometric centroid source offset	0.65 ± 0.78	0.83	0.60 ± 0.73	-0.24 ± 1.00

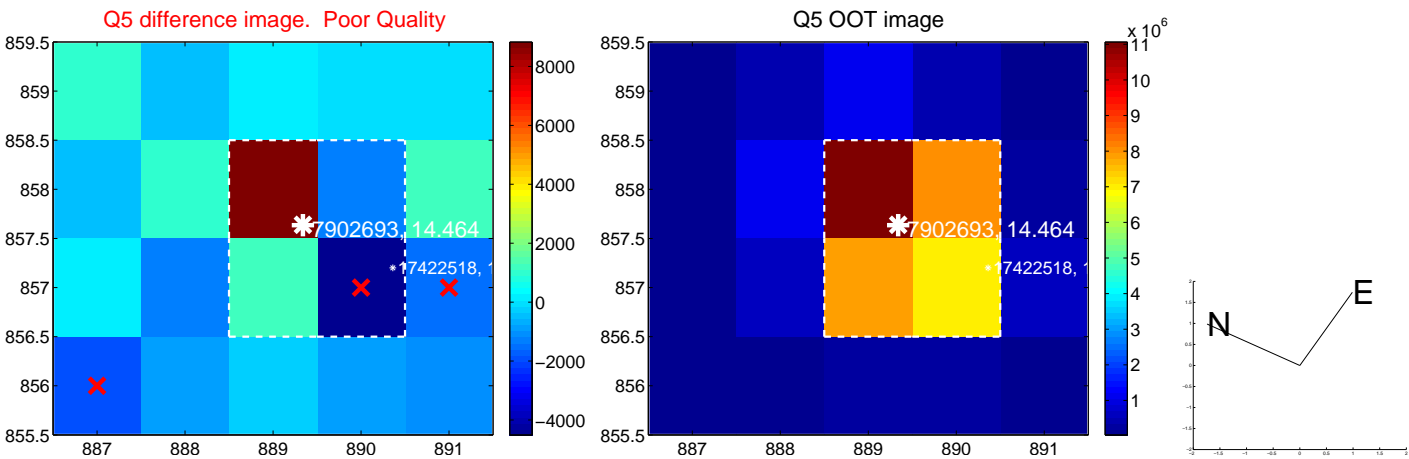


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

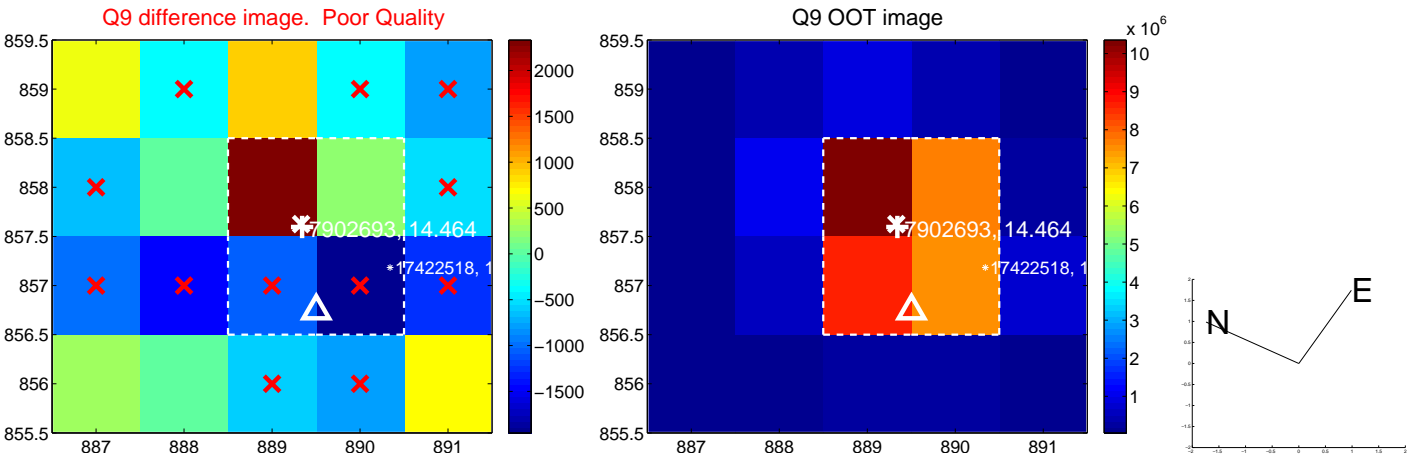
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.

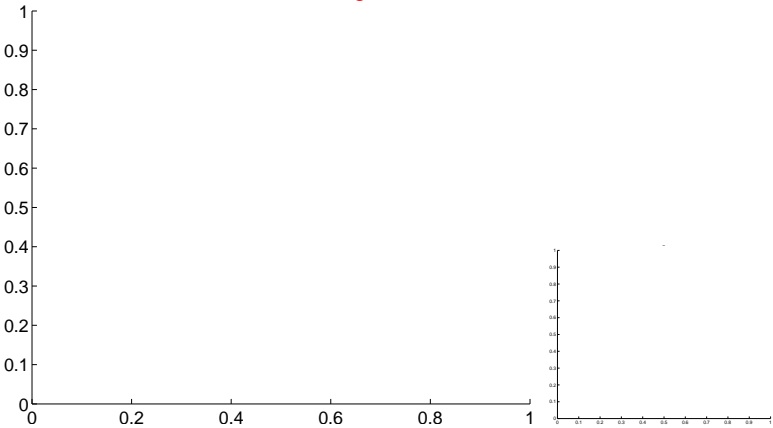


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

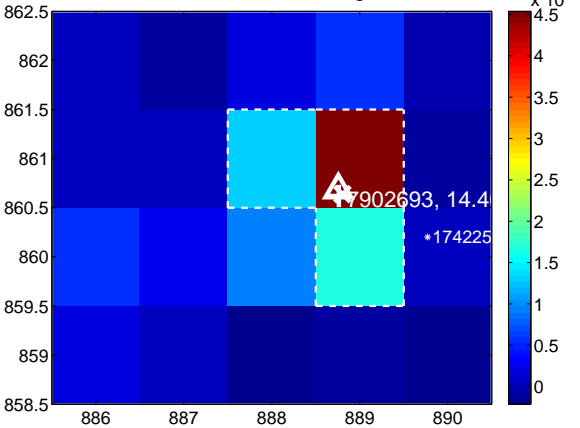
Q13 no difference image



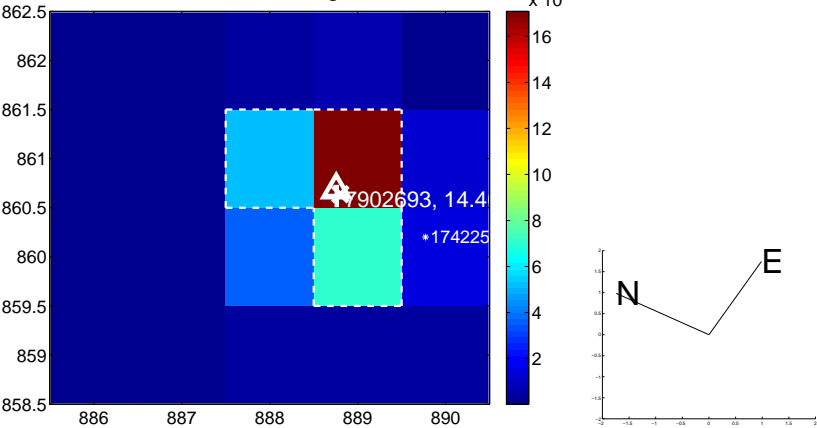
Q13 no OOT image



Q14 difference image



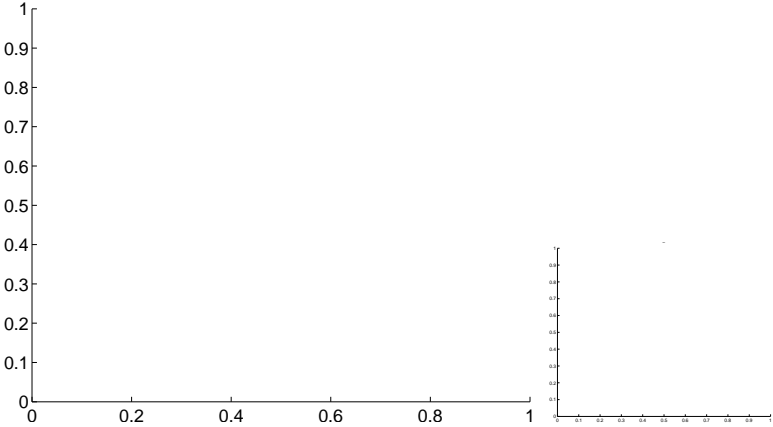
Q14 OOT image



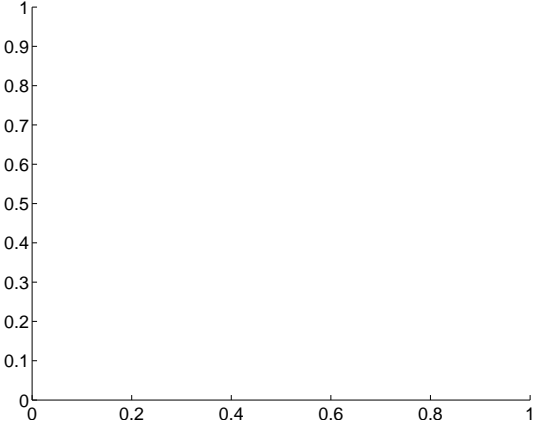
Q15 no difference image



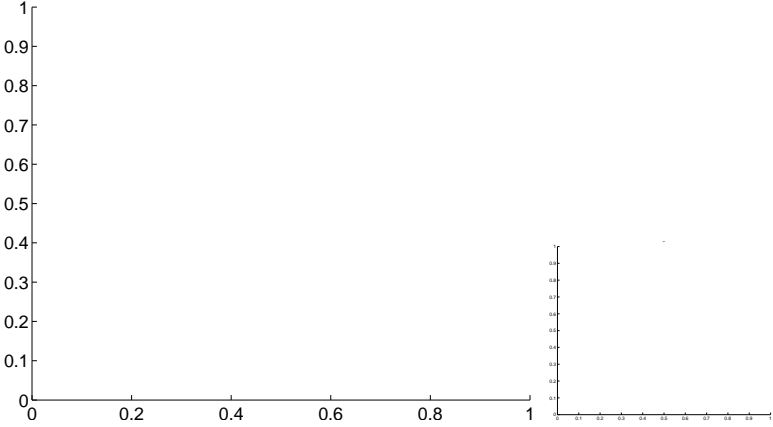
Q15 no OOT image



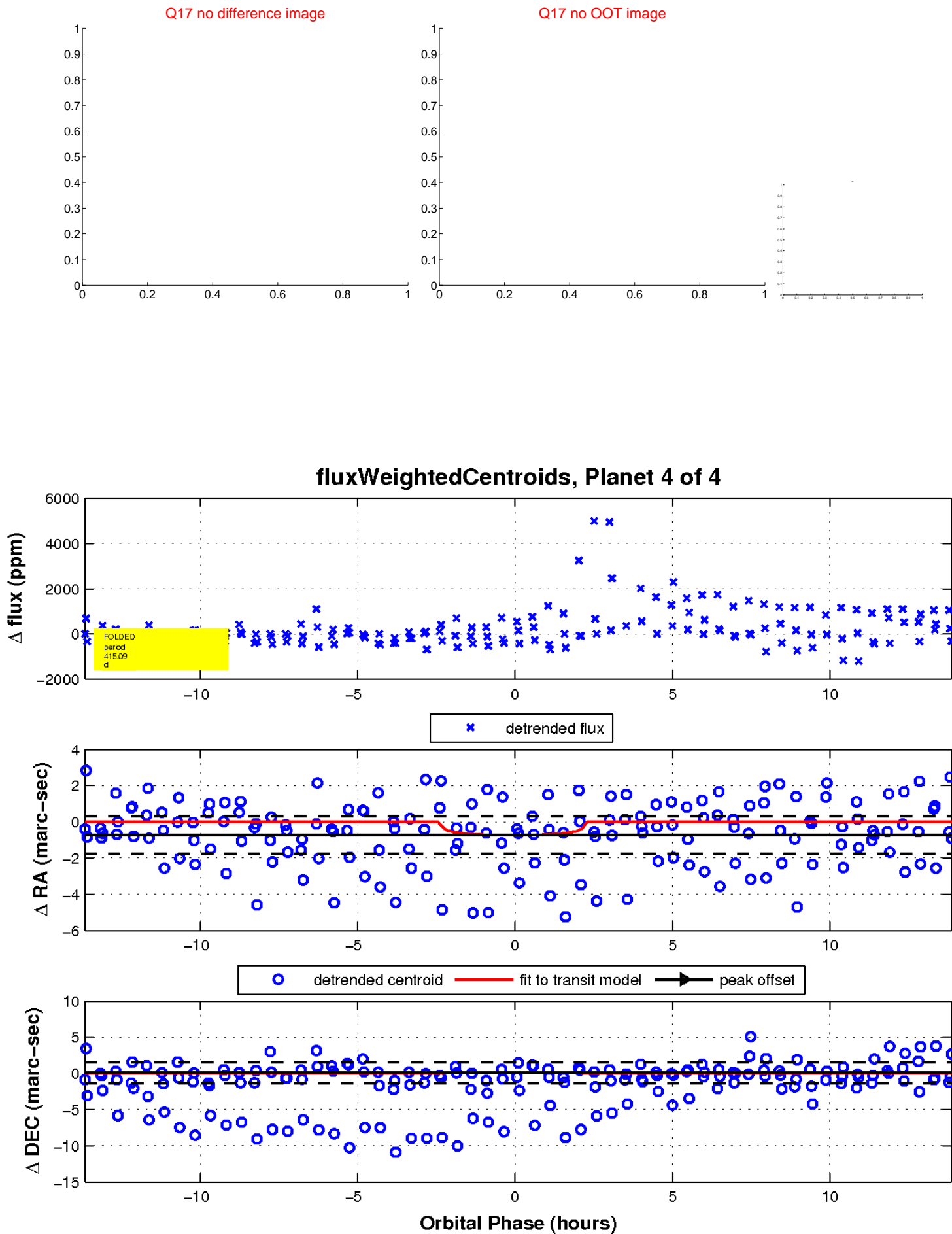
Q16 no difference image



Q16 no OOT image



white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination

